

LINGUISTIC REPRESENTATIONA STUDY ON BERTRAND RUSSELL AND LUDWIG WITTGENSTEIN 1912-1922

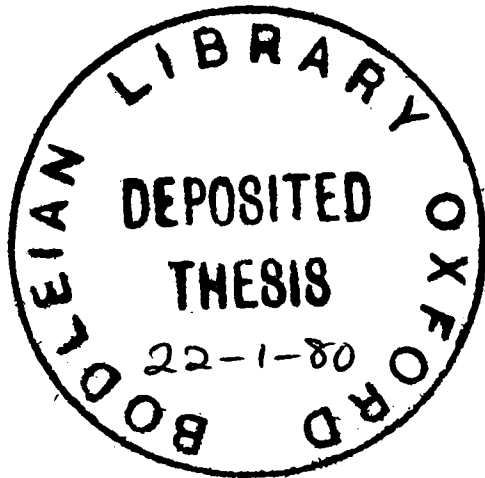
A DISSERTATION SUBMITTED TO THE UNIVERSITY OF OXFORD FOR THE DEGREE OF DOCTOR OF PHILOSOPHY, TRINITY TERM, 1979.

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The study is concerned with some aspects of the philosophical development of Russell and Wittgenstein in the period in which their doctrines interacted closely with each other. The questions investigated may be summarised as follows: (i) What does it mean to say that language represents reality in an isomorphic manner? (ii) How is it possible for language to represent reality isomorphically and yet be related to it in such a way that the relation it has in virtue of its sense is independent of the relation it has in virtue of its truth?

In answering these questions, particular attention has been paid to Russell's unpublished Manuscript Epistemology (1913) because of the impact it had on Wittgenstein, who severely criticised it. These criticisms began to emerge, as an alternative to Russell's views, in 'Notes on Logic' and in the other pre-Tractarian writings. It is in the Tractatus, eventually, that the two-fold relation between language and reality, which Russell's position left unexplained, is accounted for, by virtue of the distinction form/structure.

The following are the central theses of this study: (a) Although Russell and Wittgenstein share the assumption of linguistic isomorphic representation, their isomorphisms are totally different, since Wittgenstein makes the distinction form/structure and Russell does not; (b) Wittgenstein's development from the earlier writings to the Tractatus may be viewed in terms of the emergence of distinctions such as, the world as substance/the world as fact, possibilities/actualities, form/structure, which lie at the heart of the Tractatus and serve to substantiate its central semantic doctrine concerning the language-reality relation of representation; (c) since the Tractatus maintains the principle that 'sense is independent of the facts' (i.e., that there is an independence or priority of sense over truth) then a proposition's relation to reality cannot be accounted for by means of ostension, for such an account involves the denial of the principle; (d) the divergence between Russell and Wittgenstein as regards the main concern of the Tractatus, centres on the divergence of their views concerning the vagueness of ordinary language; (e) a central aspect of the unity of Wittgenstein's entire philosophy, as regards the internal relationship between language and reality, lies in his conception of form.



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B. Russell:

"We want self-evident belief to be the foundations of knowledge, and although some true belief is not knowledge all knowledge is true belief...If there is to be knowledge, there must be knowledge which is independent of inference. This is the logical ground for saying that there can be no knowledge unless there is self-evidence".
Epistemology, 304,305.

L. Wittgenstein:

"Substance is what subsists independently of what is the case".
Tractatus Logico-Philosophicus, 2.024.

"Language can only say those things that we can also imagine otherwise...We cannot ask about that which alone makes questions possible at all. Not about what first gives the system a foundation".
Philosophical Remarks, 54,168.

"If the true is what is grounded, then the ground is not true, nor yet false...At the foundation of well-founded belief lies belief that is not founded".
On Certainty, 205,253.

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Modes of Reference

Two different modes of reference have been adopted; (i) As regards Russell and Wittgenstein, references to their works are made by means of abbreviations followed by section number, or by page number when the work is not divided into sections. The abbreviations used are indicated in the Bibliography (see pp.253-256). In cases where a work, or a particular writing, is available in different publications (e.g., Russell's 'The Philosophy of Logical Atomism') the one indicated in the Bibliography (e.g., Logic and Knowledge, 1956, . R.C. Marsh - abbreviated as LK-) is that which has been used and from which citations are made. (ii) Reference to the work of any other author is made by giving the author's name, year of publication, and page number.

It has not always been possible to quote from the first printed version of a text. So the version from which a particular citation is made, is indicated in the Bibliography by giving its date in brackets.

In each chapter the body of the text is subdivided into sections. These are numbered solely for convenience in following the discussion.

INTRODUCTION

INTRODUCTION

1. There is a decade in the philosophical careers of Russell and Wittgenstein in which their ideas grow and develop in close interaction. The beginning of this decade marks also the beginning of Wittgenstein's interest in philosophy when he becomes a pupil of Russell's in Cambridge in 1912. The Tractatus Logico-Philosophicus appeared in England in 1922. It is in this treatise that the common problems and concerns which Russell and Wittgenstein shared in previous years were 'solved' according to the opinion of its author at that time. He writes to Russell in 1919: "I've written a book called 'Logisch-Philosophische Abhandlung' containing all my work of the last six years. I believe I've solved all our problems finally. This may sound arrogant but I can't help believing it. I finished the book in August 1918 and two months after I was made Prigioniere" (LR,p.68). After the publication of the Tractatus in the autumn of 1922, Russell and Wittgenstein met in Innsbruck apparently to discuss the recent publication. Following this meeting in November of that year Russell wrote a short article concerning a pervasive feature that ordinary language had as a system of representation, namely, that of vagueness. The ideas he expresses in this article bear some connection to his interpretation of the main concern of the Tractatus, as he puts it in the 'Introduction' to the book. Russell's article (entitled 'Vagueness', read to the Jowett Society at Oxford in 1922 and published the following year) could be viewed as closing the period of interaction between the two philosophers during which the development of their theories side by side seems to have come to an end.

2. The present study deals with some aspects of the philosophical development of Russell and Wittgenstein. Its task is limited to the understanding of some of their central ideas as regards conditions for linguistic representation. An unpublished manuscript of Russell's on Epistemology plays an important rôle. It was written in 1913 but it has come to light only in recent years. Russell attempts in this manuscript to account for "the basis of acquaintance that must underlie our knowledge of logic". It is known that Wittgenstein severely criticised this thesis, both its presuppositions and its consequences. Wittgenstein's thought following 1913 owes much to this writing of Russell's mainly by way of reaction. Hence the present study takes Epistemology as a crucial meeting point for the ideas of the two philosophers that sheds abundant light on their agreements and disagreements concerning their views on language as a system of representation of reality. Naturally these views centre around the nature of the atomic proposition, which both philosophers consider to be directly linked with reality. Reference to Russell's ideas and their development prior to 1912 serves as the foundation on which our discussion of his doctrines after that period rests. Mention of what Russell and Wittgenstein held after 1922 will be made in so far as it contributes to the understanding of the development, continuity, or discontinuity of their views on the main issues involved.

3. The set of questions that shall be investigated presently may be summed up in two general ones. The first is concerned with the manner in which language represents reality. The second, closely connected with the first, deals with the relation that there must be between language and reality if one is to represent the other in the way

it does. Both questions are related to Russell's and Wittgenstein's shared assumption of isomorphism. Roughly speaking this means that they both believe that language is a system of representation of reality, such that the structure of language mirrors the structure of reality. The first question could be posed as follows: 'What does it mean to say that language represents reality in an isomorphic manner?' It is natural to suppose that there must be certain fundamental ideas and principles common in the account of isomorphism in both philosophers. Nevertheless, it will be shown, contrary to some opinions including that of Russell's, that there is a crucial difference between the two accounts which centres around the distinction form/structure and the rôle it plays in isomorphic representation. This difference may be simply stated as follows: For Russell form and structure are one and the same; Wittgenstein on the other hand, makes a definite distinction between them in the Tractatus. In the case of states of affairs and elementary propositions, he makes structure dependent on form giving form a priority, for "form is the possibility of structure". The two notions are kept separate and have different though connected functions. Our main concern with these two notions will be in relation to states of affairs, and to the atomic propositions which represent them.

4. Wittgenstein arrived at the distinction form/structure in the Tractatus, making his isomorphism a somewhat original one, not without having wrestled before with various problems concerning the manner in which the representative capacity of language had to be explained. In earlier writings he held, in a way close to Russell, that the proposition is a unity of constituents and form which together represent facts in the world. Propositions correspond to the facts and represent them by having the same number of elements as the facts and

by displaying the same structure, i.e., the manner in which the constituents combine together. Propositions are fact-stating sentences which may be either-true-or-false. This, following Wittgenstein, may be characterised as the capacity that a proposition has in virtue of its sense and which determines this sense as bipolar. Facts make propositions true or false. So propositions by being brought against reality, or compared with the facts, gain their truth-value, i.e., they are determined as either true or false. Nevertheless, propositions have sense, i.e., have the quality of being either-true-or-false, independently of the facts that make them one or the other. So, sense is independent of truth-value, or what gives a proposition its sense is independent of what makes it true or false. In other words, the sense of a proposition is independent of the facts. This idea is one of Wittgenstein's corner stones, - if not the corner stone - of his account of linguistic representation.

5. This directly leads us into the second main question of this study. It concerns the relationship between language and reality, and could be put this way: 'How is it possible for language to represent reality isomorphically and be related to it in such a way that the relation it has in virtue of its sense is independent of the relation it has in virtue of its truth?' Or framed in a different manner: 'In what consists the proposition's relation to reality which gives it the capacity to be either-true-or-false, and in what consists the relation that makes it one or the other?' For representing as such, or 'picturing', cannot be one and the same with saying what is true. This question is one that Wittgenstein raised and one with which Russell was not primarily concerned. What led Wittgenstein to ask such a question?

6. The answer to this may be traced back to his reactions and criticisms of Russell's Epistemology. Russell in his manuscript conceives the proposition as a unity of constituents and form. In The Problems of Philosophy, consistently with his earlier views, he had said that in order to understand a proposition one has to be acquainted with its constituents; now he says, one must be acquainted with its constituents and form. Thus in order to understand any empirical proposition acquaintance with its form is required. Forms are abstract complexes ultimately characterised as 'logical objects'. Acquaintance with form, Russell surprisingly argues, is a kind of understanding that necessarily yields truth, and self-evident truth. It is on such truth that our knowledge of logic is based, and also our understanding of any other proposition, for any proposition must have a form. Russell's ultimate aim is to attain, by means of acquaintance, the self-evident truths on which he believes all our knowledge must be based. And this holds for empirical knowledge as well as for logical knowledge. According to Russell, our understanding of ordinary propositions as either-true-or-false independent of their actual truth-value, ultimately rests on our understanding of forms and on knowledge of certain primitive logical truths as something based on logical experience.

7. This Wittgenstein rejects. Experience cannot be at the basis of the conditions for sense for it will yield contingent logical truth. If sense depends on truth, propositions at the basis of language cannot be either-true-or-false independently of the facts. They are either made true in direct confrontation with the facts or will depend on the truth of other propositions whose sense ultimately would have to be accounted for. If the propositions at the basis of language do not have the representation capacity of being either-true-

or-false then, according to Wittgenstein, the sense of the false proposition would be in jeopardy. Hence the principle 'sense does not presuppose truth' must be upheld. It is a principle that expresses one of Wittgenstein's main ideas in his early thought and becomes a constant in his entire philosophy.

It is this principle that leads him to seek the two-fold relation that a proposition must have to reality. He formulates this belief in 'Notes Dictated to G.E. Moore' as follows:

"That a proposition has a relation (in a wide sense) to Reality, other than that of Bedeutung, is shewn by the fact that you can understand it when you don't know the Bedeutung, i.e. don't know whether it is true or false. Let us express this by saying 'It has sense' (Sinn)" (NB,p.111).

"The Bedeutung of a proposition is the fact that corresponds to it". (Ibid.). Later in the Tractatus Wittgenstein drops this mode of speaking and says that only names have Bedeutung and only propositions have Sinn. But the fundamental idea remains the same, for a proposition has a sense which is independent of the facts.

8. From the time of the 'Notes Dictated to G.E. Moore' onwards Wittgenstein sought an answer to the question of this two-fold relation of the proposition to reality. Logic had to be based on our ordinary knowledge of propositions about reality. There was not another world from which the 'forms' had to be imported. He had denied with this the existence of forms as objects or logical experience and so as something independent of constituents. But still he was confronted with the problem of the false proposition and its form; He says in the Notebooks:

"How can there be such a thing as the form of p when there is no situation of this form? And in that case, what does this form really consist in?" (29.10.14).

In the Notebooks he says that forms cannot be independent of constituents; they must be given in them, for knowledge of constituents is all we have. But if this is so, must our knowledge of forms derive ^{from} or be directly connected with the facts where constituents occur? And what when there is no such fact of that form, as he has just asked? If knowledge of forms must be given in the knowledge of constituents, would not this knowledge also be derivable from experience, from the facts, and so make logic after all something dependent on experience? And as experience yields contingent truth would not logic be based on contingent truth, and so sense on truth? There is no definite answer to these questions in the Notebooks. But by setting the condition that knowledge of forms must be given in the knowledge of constituents he has established a constraint on any admissible answer.

9. It is in the Tractatus where form is understood as possibilities inherent in the constituents, and so is distinguished from structure understood as actual configuration of those constituents, that the two-fold relation of the proposition to reality is ultimately accounted for. The proposition represents, has a sense, can be either-true-or-false, in virtue of its form; on the other hand it can be determined as true or false in virtue of its structure. The proposition has its representative capacity in virtue of its form; the correlation that it has with the facts in virtue of its structure cannot give it such a capacity. That is why at the heart of the picture theory, Wittgenstein's own account of isomorphic representation, it is said:

"What a picture represents it represents independently of its truth or falsity, by means of its pictorial form"
(TLP, 2.22).

Pictorial form is ultimately characterised as logical form, the form of reality, the possibilities that inhere in the objects, i.e. in the

constituents. 'The world' of the Notebooks did not yet have a 'form', in the Tractarian sense, as its substance. It is primarily a world of facts, of actualities. The overall important distinction between the possible and the actual had not yet fully emerged. In the Tractatus form is the substance of the world which is shared by language, contained in language. So language and the world are totally isomorphic in their possibilities, and this is what makes possible that they may not be in their actualities. Form belongs to the realm of the possible; and it is what accounts for the relation that a proposition has to reality in virtue of its sense. Structure, on the other hand, belongs to the realm of what is factual, i.e. actual configurations, and presupposes form, for "Form is the possibility of structure" (TLP,2.033). The proposition has the capacity to be a picture, representing independently of its truth-value, in virtue of its form. So its correlation with the world in virtue of its form could perhaps be called a formal correlation. This correlation has to do with sense or picturing capacity, i.e. with "the possibility that things are related to one another in the same way as the elements of the picture" (TLP,2.151) (my emphasis). The correlation that a proposition has with the facts which makes it true or false may be called a structural correlation.

10. Both correlations are proper to a proposition as a picture of something, i.e., as a picture that shows how things stand and says that they do so stand (TLP,4.022). But the structural correlation presupposes the formal one, for structure presupposes form, as truth presupposes sense, as actualities presuppose possibilities, or, as Wittgenstein also puts it, the question 'How', presupposes the question 'What', or what can be said presupposes that which cannot be said but only shown. This is so because the propositions of language have sense

independent of truth. The priority of sense over truth demands the priority of form over structure, or of possibilities over actualities, which is another way of saying "sense is independent of the facts" (4.061). The doctrine that 'sense does not presuppose truth' is at the very heart of the Tractatus, whose isomorphic doctrine has to be understood in terms of it. Hence, if interpretations of Wittgenstein's views lead to a denial of this principle, then either those interpretations are incorrect or the Tractatus is inconsistent. But if the Tractatus may be regarded precisely as the attempt to account for such a doctrine, its inconsistency cannot lie in its very centre, as some commentators may lead us to believe by assimilating Wittgenstein's to a Russellian kind of isomorphism.

11. That Wittgenstein's version of isomorphism is similar to that of Russell's has been explicitly claimed by some commentators, and implicitly held by others. For example, G.J. Warnock in his English Philosophy since 1900 says: "Like Russell, he located the real link between language and reality in the relation of atomic propositions to atomic facts" (1969,p.49) and he characterises this link in terms of the structural correlation. This view seems to be shared by P.M.S. Hacker in Insight and Illusion; he says:

"Though the sense of elementary propositions is independent of their actual truth-value, they stand in a direct relation to the world via their constituents" (1972,p.40).

But he goes on to account for this relation in terms of ostension; thus he has to accept the presence of true propositions at the basis of language:

"If 'A' is taken to name a simple, then it may readily seem to one that one is in possession of a form of language which both expresses a true proposition (for to be sure this is A !) and also explains the meaning of 'A' by establishing a direct connection with reality" (p.157).

Miss Anscombe in her Introduction to Wittgenstein's Tractatus, claims that Wittgenstein's version of picturing or isomorphic representation requires only two features, (i) the relation between the elements of the proposition or picture and those of the facts, (ii) the correlation between the elements of both; Miss Anscombe adds that the correlation is made by us; thus she interprets Wittgenstein's isomorphism in a Russellian manner. In other words, picture and fact represent each other in virtue of their structural correlation, which amounts to saying that what makes a picture into a picture of something is really its structural correspondence, and not its form.

12. In all these interpretations the distinction between form and structure for the account of the elementary proposition's relation to reality is not seen to be of importance and it is somehow ignored. Here the stress laid by Wittgenstein on the priority of sense, the priority of form, and the priority of possibilities, over truth, structure and actualities respectively, appears to be disregarded. The consequence of this, apart from ignoring something important in the Tractarian doctrines, is that it leads to the denial of the principle that sense does not presuppose truth. For if the realm of form, of possibilities, does not account for sense, then it must be that of actually obtaining facts that does so. In other words, the giving of sense to propositions, or of meaning to names, will depend on the correlation of the elements of the proposition as a picture and those of the actual facts. So there must be at least some true propositions which fix the correlations, and also agreement about that truth. At this explicit conclusion doctrines, like that of Miss Ishiguro's in her paper 'Use and Reference of Names', arrive. Any doctrine which maintains that names are given meaning and so that propositions are

given sense in actual correlations, i.e. by means of what we have called the structural correlation, will have to face as a necessary consequence that there must be true propositions at the basis of language, and hence that sense does presuppose truth.

13. If similarity of structure attained by the structural correlation is what gives the proposition its capacity to be a 'picture of...' then it may be claimed that the relation between language and reality is a symmetrical one. This has been rightly denounced by H. Schwyzer as a "simple-minded" isomorphism that Wittgenstein never held. But because this is not the relation that language and reality have, Schwyzer goes on to deny that there is any isomorphism at all:

"A Satz has meaning not because it is isomorphic with anything else, but because it is itself the expression (der Ausdruck) of meaning, of sense;.....There is not such a thing as a "relation" between language and the world" (1966,p.288).

This bluntly denies Wittgenstein's explicit claim concerning the essential relation that a picture or a proposition must have with the world in virtue of its form (4.03). Although the proposition does not have a 'facsimile' or 'stencil' mode of symmetrical correlation with the world in terms of its structure - or at least this is not the only correlation - it cannot be denied that it has a correlation, which is "essential" or internal, in virtue of its form. Schwyzer emphasises the movement there must be from language to the world if the proposition is a saying, as Wittgenstein thinks it must be, but by doing so he appears to ignore the presupposed formal correlation or movement that there must be from the world to language by means of which language 'absorbs' the form of the world. For both language and the world share the same form, but form is prior in the world. This form is the possibilities of objects which the names contain or have taken on them by being their representatives.

Language is dependent on the world for its form. Here lies the internal connection that accounts for sense being prior to truth.

14. It was said at the beginning that Russell and Wittgenstein shared the assumption of isomorphism which amounts to their belief that the form of language mirrors the form of reality. But did both Russell and Wittgenstein understand by 'language' 'ordinary language' in this context of isomorphic representation? The answer is in the negative. The reason being due to an assumption of Russell's that Wittgenstein never shared. It may be put in terms of the difference in attitude they have towards ordinary language. Russell believes that only an accurate symbolism represents reality isomorphically, ordinary language does not. Wittgenstein, on the other hand, claims that language, all language, does represent reality. And as representation in the Tractarian account is only accurate isomorphic representation, then ordinary language represents reality isomorphically. Perhaps the matter could be put another way. Both Russell and Wittgenstein would agree that in an analysed language the one-one correspondence between the propositions and the facts they represent obtains, so that such a language may be said to be isomorphic with reality. Then where does the difference between Russell's and Wittgenstein's view lie? On the side of Russell it lies in the contention that ordinary language cannot be such an analysed language, or cannot be analysed in such a way as to reach propositions in which the one-one correspondence with facts obtains. This is because for Russell ordinary language is not in order as it is and so has not the isomorphic capacity to represent. It has to be 'reconstructed'. This is precisely what Wittgenstein denies. For Wittgenstein ordinary language is in order as it is, although this 'order' may not be open to view. Hence, certain uncovering would be

required to exhibit that order, but ordinary language does not need reconstruction.

Is there any further reason for their difference of opinion ? Can the divergence be pinpointed in a more concrete manner ? The answer here is in the affirmative. It will be shown that vagueness, understood as the non-obtaining of the one-one relation between constituents of propositions and facts, is involved in the ultimate explanation of the divergence. For Russell ordinary language is vague, inherently vague. It cannot be made precise because its words could never have that one-one correspondence with what they mean which isomorphic representation requires. Wittgenstein's contention that ordinary language is in order as it is, makes vagueness a matter of superficial appearance. For him since language represents it must be precise. Russell's view of ordinary language as inherently vague, contrasted with those of Wittgenstein's, may be taken as one of the crucial reasons that led Russell to a misinterpretation as regards the main concern of the Tractatus.

15. My intentions in this study are exegetical rather than critical, although criticism has not been neglected. As what is sought is an understanding of the interaction of Russell's and Wittgenstein's ideas, the order in which the questions are dealt with is for most part chronological, although not rigidly so. It was deemed appropriate to open the study by drawing attention to the shared assumption of isomorphism in order to put into context, in a general manner, the related doctrines. This is done in Chapter I together with a discussion of some of Russell's early views on the proposition, which finally reach a new stage in his 1913 Epistemology. This new stage of his ideas is discussed in Chapter II in connection with Wittgenstein's

reactions to them. Having rejected most of Russell's views, of which the most characteristic is that 'there are logical objects', and that as a consequence there are self-evident truths about their existence, Wittgenstein is confronted with various problems which his new stand involves. Here they have been summed up under a fundamental question in linguistic representation, namely, the conditions that must be fulfilled for a proposition to represent reality, of be a 'picture' of reality, such that it represents it independently of its truth value. The answer to this question given by Wittgenstein in the Tractatus is dealt with in Chapter III. Russell's views as well as those of other commentators concerning Wittgenstein's account of what makes a picture capable of describing reality, and the relation it must have to it, are discussed in Chapter IV. Then follows an elucidation of Russell's and Wittgenstein's conception of the relationship between ordinary language and isomorphism, and the bearings this relation has for Russell's interpretation of the Tractatus.

16. The particular contributions the study purposes to make could be summed up under three headings. Firstly, it is a complement to previous work done on the interaction of Wittgenstein's and Russell's ideas. In particular, by making use of Russell's unpublished Manuscript in relation to Wittgenstein's reaction to it, it complements views already presented in the articles that have been written by B.F. McGuinness (1974) and D.F. Pears (1977). What is said here may be seen as a stepping-stone towards a further clarification of the philosophies of Russell and Wittgenstein, particularly in reference to their different views about linguistic isomorphic representation.

17. Secondly, Wittgenstein's enterprise in the Tractatus of building

philosophy upon logic may be regarded as a study of the necessary features of language, or of its 'essence', because they disclose what is philosophy's main concern: 'the essence of the world' or that which lies beyond the facts, beyond the realm of what can be said. The Tractarian logico-linguistic doctrines yield an ontology. They are not merely parallel doctrines, i.e. a linguistic atomism and ontological atomism independent of each other and made to match, as^R J. Fogelin has suggested recently (1976,p.15). Ontological doctrines in the Tractatus have logico-linguistic motives underlying them. On these lines the present study attempts to show that the Tractarian semantical doctrine 'sense does not presuppose truth' or 'sense is independent of the facts' (which may be regarded as a corner stone of the Tractatus together with the 'determinancy of sense' thesis) underlies and is substantiated by the ontological doctrine of the priority of the form over the structure of the world and by its equivalent doctrine within the picture theory of the proposition.

18. Thirdly, the issue concerning the disagreement about the 'ideal language' between Russell and Wittgenstein is clarified by bringing in Russell's views on vagueness as they occur in the 'Introduction' and are further substantiated in his 1922 article on 'Vagueness'.

19. Finally, a general remark which derives from the consideration of Wittgenstein's early doctrines and the points of contact it has with the later work, may be made. There is not only a unity as regards the one question his whole work is concerned with, namely, what it is for language to be a system of representation of reality, but also a unity in the two answers he gave to this question in the Tractatus and later in the Investigations and On Certainty. Underlying these two answers

there is a continuous thread or connecting line that could be summed up, as by A. Kenny, in the 'bipolarity thesis' which may be viewed under the thesis that 'sense does not presuppose truth' or 'sense is independent of the facts'. This thesis is also connected with the concern as to where the limits of sense must be drawn. For although the variety of phenomena which are presupposed to be formed, to make sense, to be true or false, may be regarded as 'general facts', these are the facts that set the limits, and by so doing make sense possible (as having the quality of being either-true-or-false). They constitute a foundation of 'accepted truth' which transcends the truth-falsity evaluation, i.e. they cannot be true in the same sense in which the facts they limit are; as it is put in On Certainty:

"If the true is what is grounded, then the ground is not true, nor yet false"(205).

Hence, the thesis 'sense is independent of the facts' is applicable, in an extended manner, to this later phase of Wittgenstein's philosophy too, since the bipolarity thesis could be taken to mean that a proposition and its negation exhaust all possibilities. In the Tractatus these possibilities were fixed and determined by the form of the world, i.e. the possibilities inherent in the fixed set of objects each of which has a fixed set of possibilities. In the later work these possibilities are those of forms of life. These are open and flexible as life is. But in both cases the possibilities envisaged are those of language. Its form determines them, and this form - as a grammar - limits language from within. For sense is determined by form and so is independent of the actual facts.

20. A word on the limits of this study. Firstly, there are various sources of influence in the Tractatus, as Wittgenstein himself acknowledged.

Russell's doctrines is one of them. By concentrating here on this, there is a risk of overemphasis. Nevertheless it is hoped that no distortion has resulted from the limits that selectivity imposes. Secondly, since an historical approach has been adopted here, studies in the Tractarian isomorphism such as that of E. Stenius in his Wittgenstein's 'Tractatus', have not been of primary interest for the precise reason that they have deliberately avoided an historical approach. Thirdly, there is no doubt that a more comprehensive study could be made of the relationship between Russell's views in his Epistemology and Wittgenstein's reactions to it in his early doctrines. The task is not exhausted here. Nevertheless the aspect that has been selected appears to be central to their theories of logic and linguistic representation. For it directly affects their views concerning the relation between logical propositions and empirical propositions, how these two kinds of propositions gain their meaning and in what way they are true or false, and so how they are related to reality.^(°)

(°) As Russell's Manuscript on Epistemology has not yet been published, some notes about its historical interest are given in Appendix A. Further, certain revealing details concerning Russell's 'Introduction' to the Tractatus are not generally known. These are indicated in Appendix B. Both Appendices serve as an aid to understand the background against which the interaction between Russell and Wittgenstein took place (see below pp.249-252).

CHAPTER ONE

RUSSELL'S MAIN TENETS

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RUSSELL'S MAIN TENETSI. Isomorphism : A Shared Assumption

1. Among the various assumptions that Russell's and Wittgenstein's theories of language share, there is a fundamental one that may be taken to sum them all, that of isomorphism between language and reality. The expression 'isomorphism' is one that Russell and Wittgenstein do not use. It is apparently R. Carnap who, from mathematics, introduces the term into philosophy. He uses it in his Der logische Aufbau der Welt (1928). In this work he acknowledges his debt to Russell's account of structure as a source of influence in his own doctrine of isomorphism (1967,11-12). Wittgenstein, it might well be argued, inherited from Russell the isomorphic assumption.

In general, 'isomorphism' means identity of form (or structure); therefore, to claim that language represents reality in an isomorphic manner is to claim that reality shares its structure with language. Russell and Wittgenstein did not question this assumption. It was something 'given' in what they took to be the representational character of language. They agree that the first necessary condition for anything to represent something else, is that there be something in common between what represents and what is represented. What language has in common with reality is its form, Wittgenstein claims (TLP,2.17). Language mirrors the form of the world. In the same spirit Russell considers

that the structure of language mirrors, and so reveals, the structure of the world. That is why for him the logical analysis of language is an inquiry to discover "what sort of structure we may reasonably suppose the world to have" (LA,p.388). In 'The Philosophy of Logical Atomism' Russell also says that the "objective complexity of the world.....is mirrored by the complexity of propositions" (p.197). Propositions are said to correspond to facts in an isomorphic manner. This is a belief that Russell probably accepted from Leibniz⁽¹⁾, and one that he held throughout his life.

2. The doctrine of isomorphism lies at the centre of Russell's and Wittgenstein's logical atomisms. These atomisms, as is now accepted, differ in some of their fundamental tenets. Nevertheless, being atomisms based on the notion of isomorphism, they share assumptions and are confronted with many of the same problems. The following interconnected notions are central to isomorphic representation: complex and simple, indefinable, analysis, definiteness of meaning, form and structure. What is complex can only be accounted for in terms of what is simple, Russell argues. The simple is the ultimate element which allows for no further complexity. It is the indefinable which is reached by a process of analysis, and is not further analysable. Propositions represent facts in an isomorphic manner by means of the one-one correspondence between words - elements of propositions - and the things for which they stand - constituents of facts . This correspondence has the character of definiteness proper to a denoting theory of meaning, which lies at the basis of isomorphism. These are all questions of common concern to Russell and Wittgenstein, but the fundamental ones may be taken to be those of form and structure which define the very notion of isomorphism.

3. Russell wrote in 1919 in Introduction to Mathematical Philosophy:

"the word 'structure' - a word which, important as it is, is never (so far as we know) defined in precise terms by those who use it".(p.61).

He was still unaware that in the Tractatus (finished by this time) structure had received a very determinate definition and function (2.032,2.033,2.15), similar in some respects and different in others to his own account of the notion. There are various places in which Russell deals with structure⁽²⁾. For the present purposes the account given in 1919 in Introduction to Mathematical Philosophy will be taken as our point of reference. In this work Russell spells out the notion in non-symbolic terms, and in a relatively detailed manner. The account does not differ from what Russell says of structure on other occasions. Russell defines structure as 'relation number'. By this he also implies similarity, or identity, of structure (he does not explicitly distinguish between similarity and identity).

4. Structure can be ascribed to a complex which is "anything analysable, anything which has constituents"(MS,144) and only to such a complex. Propositions as well as facts are complexes; they have constituents which differentiate them from mere aggregates because they are related in a determinate manner. Their relatedness is their structure, that which makes them into a 'whole' or 'unity'.

Wittgenstein, with Russell and Frege (P,481) also claims that the proposition is not a "muddle" of words, rather it is articulated (TLP,3.141); by this he means that

"the proposition isn't a mixture of words in the sense in which a colour may be a mixture of other colours... it is no MIXTURE at all but a STRUCTURE"(LO,p.24).

It is by describing how constituents are related - constitute a structure

- that the account of the proposition will be given, including its relation to the fact to which it corresponds. In this account analysis is a necessary process.

5. The main task of analysis is conceived by Russell as "the discovery of the constituents and the manner of combination of a given complex" (MS,222). Constituents and their 'relatedness' is what is essential to complexes. A complete analysis of complexes must lead to establishing ultimate constituents, that is, the simples which are also indefinables. These are combined to form atomic facts. The propositions representing them are the atomic propositions constituted by the indefinable simple signs.

In his 1913 Manuscript Russell makes a distinction between material analysis and formal analysis (MS,222) which he continues to hold in 1919 in Introduction to Mathematical Philosophy. He says that material analysis is concerned with the discovery of the constituents of a complex. This is the task proper to philosophy and science. Formal analysis, on the other hand, is concerned with the discovery of the manner of combination of constituents without investigating their inner nature (Ibid.). This is the task of logic and mathematics. It only presupposes the numerical multiplicity of elements. These are assumed not to have any inner complexity determining the structure in which they can be arranged. What is important in logical analysis is the discovery of structure (IMP,p.60; also HKSL,p.251).

6. Although Wittgenstein, with Russell, subscribes from the start to the philosophical method of analysis (NL,p.99), they hold different opinions about the actual reaching of the ultimate constituents, and of the nature of those constituents. In the Notebooks Wittgenstein deals with the question of whether analysis comes to an end. This question

is connected with his doubts as to whether there are ultimate simples. In the Notebooks he does not offer a definite answer, but in the Tractatus he adopts an affirmative one. He is there definitively committed to the existence of simples. This position, maintaining that analysis must come to an end, may be called one of absolute atomism⁽³⁾. Wittgenstein's reasons for adopting such a position are purely semantical. Russell, on the other hand, because of his empirical doctrines and a strictly 'scientific' outlook is generally committed to a relative atomism as expressed in his works, ranging from The Principles of Mathematics (see e.g. 439) to his Human Knowledge, where he says:

"Every account of structure is relative to certain units which are, for the time being, treated as if they were devoid of structure, but it must never be assumed that these units will not, in another context, have a structure which is important to recognise" (p.252; see p.259).

In other words, what we may take to be simple at a certain time or state, may later be found not to be so. At times Russell claims that this state of affairs is to be recognised as something which simply sets a limit to our knowledge. Naturally, we should be aware of this in order not to make wrong assumptions, as he remarks above. But this position appears not to have serious consequences. Nevertheless, on other occasions (e.g., LA, p.338), Russell sees this 'relativity' as a difficulty in knowing the definiteness of the meaning of words, and so as a serious hindrance in the construction of a precise language, that is, a language capable of sharing a similar structure with reality.

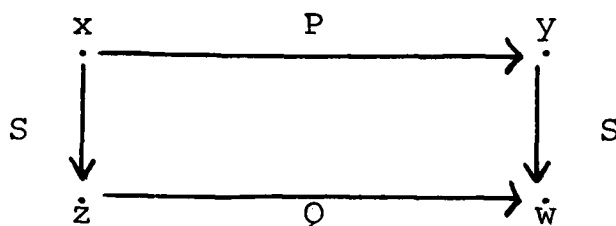
7. Russell's conception of similarity of structure as "relation number". If there is a correspondence between two complexes so that one can be a representation of the other then, Russell claims, the two complexes have similarity of structure. He says this in Introduction to Mathematical Philosophy:

"Two relations [complexes] have the same 'structure', we shall say, when the same map will do for both - or, what comes to the same thing, when either can be a map of the other...the very same thing as what we have called 'likeness'. That is to say, two relations have the same structure when they have likeness, i.e., when they have the same relation number. Thus what we defined as the 'relation number' is the very same thing as is obscurely intended by the word 'structure' "(p.61).

The clearest example of similarity of structure, Russell argues, is a geographical map, by means of which we can interpret the structure of an area. Russell's definition of similarity of structure or "relation number" is as follows:

"We may define two relations [complexes] P and Q as 'similar' or as having 'likeness', when there is one-one relation S whose domain is the field of P and whose converse domain is the field of Q, and which is such that, if one term has the relation P to another, the correlate of the one has the relation Q to the correlate of the other and vice versa"(Ibid.p.53-54).

The following diagram illustrates this:



The complex xPy can be regarded as part of a map in which x and y are related by P . This relation represents its corresponding one in the actual geographical area zQw . The correspondence is brought about by what Russell calls the correlator S , which establishes the one-one relation between the elements of both complexes. Thus the one-one correspondence function of the correlator expresses the basic requirement that if two structures are to match formally they must have the same number of constituents (equal numerical multiplicity) and there must be a relation relating the constituents of the two complexes to each other. That is to say, similarity of structure is explained by:

- a) the one-one correspondence between the elements of the complexes, and

- b) the preservation of a correspondence in the way the elements are related (i.e. sameness of relation between P and Q).

Russell assigns these two functions to the correlator. Thus a relation S is a correlator of two complexes, say P and Q, if : S (i) is a one-one relation between constituents, (ii) has the field of Q for its converse domain, and (iii) is such that P is the relative product of S and Q and the converse of S (IMP,p.54).

9. Conditions (i) and (ii) of the correlator refer only to the constituents and ensures the equal numerical multiplicity in both complexes, i.e. the one-one correspondence. Condition (iii) is meant to preserve the properties that similar relations may share, (independently of the inner nature of the terms in their fields, which are assumed to be 'simple', like points) i.e., transitivity, diversity, etc. This way of examining similarity of structure (formal analysis) is what matters in logic and mathematics, Russell argues.

10. This mathematical model of similarity of structure is the one which Russell also applies to the representative correspondence (the one-one relation of symmetry) between proposition and fact. For example, he says in his 1913 Manuscript:

"...there is certainly a one-one correspondence of complexes and facts...we shall assume that they are identical" (MS,144).

(Russell does not elucidate in this instance the relationship between complex and fact. He does so on other occasions - see below pp.52ff. For the moment we shall, like Russell, make no distinction between the two terms). In his article 'On Propositions' - an article apparently inspired by Wittgenstein's picture theory⁽⁴⁾ - Russell states the similarity of structure between proposition and fact thus:

'The most important thing about a proposition is that, whether it consists of images or of words, it is, whenever it occurs, an actual fact, having a certain analogy of structure...with the fact which makes it true or false' (p.309).

There is not only similarity of structure between proposition and fact, but also (and this is of great importance for logic) various propositions, or facts, can have the same structure of form. A characteristic passage which summarises Russell's views - frequently expressed in other places - concerning the identity of structure or form in different propositions, occurs in 'Vagueness':

"One structure is an accurate representation of another when the words describing the one will also describe the other by being given new meanings. For example, 'Brutus Killed Caesar' has the same structure as 'Plato loved Socrates', because both can be represented by the symbol 'xRy' by giving suitable meanings to x and R and y" (p.89).

Russell claims that, strictly speaking, the introduction of words (not variables) describing the form of the two different propositions, is not really relevant in the definition of structure. For this reason a more "exact" definition of this correspondence would be:

"One system of terms related in various ways is an accurate representation of another system of terms related in various other ways if there is a one-one relation of the terms of the one to the terms of the other such that, when two or more terms in the one system have a relation belonging to that system, the corresponding terms of the other system have the corresponding relation belonging to the other system. Maps, charts, photographs, catalogues, etc., all come within this definition in so far as they are accurate" (Ibid.).

11. There are three points worth noticing, which the above conception of structure brings to the fore. They bear important connections to Russell's understanding of the two central questions of our study concerning the manner in which language represents reality. The first point refers to the necessary and sufficient conditions of isomorphic representation; the second refers to the one-one relation

as the 'model of precision'; the third refers to the relation of independence that there must be between the constituents and the determinate structure in which they occur in a complex. Let us consider these three points in turn.

12. Conditions of representation. In accordance with what Russell has said they may be summarised as follows:

(i) Equal numerical multiplicity. It is clear that if correspondence between complexes is to obtain, there must be, at least, the same number of constituents in what represents and what is represented. Otherwise the one-one relation of symmetry between the two complexes could not obtain.

(ii) Structure. A complex is only a complex if its elements are combined in a determinate manner, i.e., if it has a structure. Thus, two complexes or facts, that may represent each other, have structures which are independent of each other, for only in this case can there be a correlation.

(iii) Correlation between the two facts. Only when the correlations between the two facts are made can their structures be taken to be 'similar' and have, through this similarity, the capacity of representing each other, i.e., be isomorphic with each other.

Hence, it is similarity of structure, involving the three stated conditions, which gives complexes their representative capacity. In other words, the fact that a correlation can be drawn between the two complexes, reveals that it is in virtue of its structure that one complex can represent another. The correlation - Russell's "correlator" - that actualises this possibility can be called a structural correlation between the two complexes. It is important to emphasise that such a correlation cannot obtain unless what represents and what is represented, according to Russell, are complexes. That is to say, prior to the correlation each complex must already have a structure independently

of the structure of the other. Only in this case can a correspondence obtain or not obtain. This independence amounts to saying, in the case of language and reality, that there is an a priori independent structure in both, so that they match via the structural correlation. In the course of our discussion we will consider the reasons which Russell has for holding this a priori independence of structure in language and the world. We shall also see that Wittgenstein by adding to these three conditions of representation a fourth one, namely, 'form', makes us take his conception of isomorphism in a different manner from that of Russell's.

13. The one-one relation as the model of precision. This idea of Russell's could also be described as the thesis of the one-one relation of determinacy. It can be formulated as follows:

In any isomorphic representation, if the one-one relation intended does not obtain, an indeterminacy in the representation is brought about. Thus the representation does not have the property of "accuracy" (which Russell characterises by the 'uniqueness and definiteness' conditions).

There is no doubt that Russell attaches a great significance to the thesis of his isomorphic conception. It is interesting to note that in 1903 he already uses the notion of the "one-one relation" to interpret Leibniz's theory of representation. He says:

"One thing expresses another, according to Leibniz, when there is a one-one relation of the parts of the one to those of the other, as, e.g., in geometrical projection (e.g., Gerh., ii, 112; vii, 264). Now such a relation is possible both between every pair of monads and between every monad and the whole system of monads" (5).

This manner of understanding representation or 'expression' - by means of the one-one relation - accords with Russell's conception of meaning in terms of 'denoting' and as having to be 'precise'. In other words, the one-one correspondence may be viewed as the central relation in a referential or denotational theory of meaning, which Russell holds, first,

for all words, and then for the constituents of propositions. Wittgenstein holds it for the Tractarian 'names' which are the constituents of propositions.

The basic principle of a denotational theory of meaning is that 'the meaning of a name (or propositional constituent) is the object it stands for'. Put in a stricter Russellian fashion the principle runs "if a word means something there must be some thing which it means". This view of denotational meaning requires of meaning to have the properties of 'uniqueness' and 'definiteness' which obtain, according to Russell, if the one-one relation between what means and what is meant obtains. Contrariwise, a one-many relation or a one-indefiniteness relation or generality give rise to vagueness, which is a feature proper to natural language.

For Russell it is clear that any vagueness or indeterminacy is an absence of the one-one relation. His first explicit statement on the nature of vagueness occurs in his 1913 Epistemology in the following terms:

"the relation of 'representing', which holds between images and sense-data, is not one-one; a whole stretch of objects may be represented by a given image and a whole stretch of images may represent a given object. This fact seems to constitute the logical analysis of 'vagueness' (MS,343).

A similar thought occurs in Our Knowledge of the External World:

'the relation of visual sensation to physical object is one-many, not one-one, because our senses are more or less vague: things which look different under the microscope may be indistinguishable to the naked eye" (p.129).

Ordinary words are also "more or less vague" for the same reason (see e.g., I.p.x;V,p.87;LA,p.338,etc.). That is to say, because the failure of the one-one relation occurs different kinds of indeterminacy appear. This, according to Russell, is not only an expression of the semantic phenomenon of generality - by which words stand for various objects in a one-many relation - but also an expression of the way the meaning of

those words are given to us by the correlation of our senses and the physical data (OKEW,p.129;V,p.87), i.e., in acquaintance. Thus, meanings and the way in which meanings are acquired by acquaintance - semantic and epistemological considerations - are inseparable in Russell's theory of how language represents reality. This is an important point that must always be borne in mind in the understanding of Russell's linguistic doctrines.

14. Although Wittgenstein does not use the Russellian expression 'one-one relation' to account for determinacy of sense, it is clear that his commitment to a denoting theory with the explicit requirement of equal numerical multiplicity between what represents and what is represented (TLP,4.04), requires such a relation. But Wittgenstein's constituents of propositions are not 'simples' in a Russellian manner: they, perhaps, resemble more closely the Leibnizian monads which have 'states'. For the Wittgensteinian simples have 'form' or 'essence' constituted by their possibilities of combination. Hence, the one-one relation between simple-name and simple-object must, in order to meet the determinacy of meaning requirement, have some condition to fulfil other than that which a straightforward 'denoting' (or one-one) correlation based on acquaintance involves. Wittgenstein expresses this by saying that a name is the "representative" of an object. The interpretation of what this may mean, we have to postpone for the moment. It may be added, nevertheless, that in Wittgenstein's theory of language the epistemological principle of acquaintance does not explicitly play a role. So, it is not because of acquaintance that the indeterminacy of meaning obtains. This phenomenon must rather be explained in relation to Wittgenstein's semantics. In the Tractatus, the concept of empirical experience, or acquaintance, is left undefined, in contrast with the treatment that the

concept receives in Russell's writings.

15. The Thesis of independence. This thesis is concerned with the relationship between constituents and their structure by which they constitute 'unities' not 'mixtures'. It maintains (i) that constituents and their manner of combination are to be distinguished - for the same constituents can enter in different combinations, and also similar combinations can be formed by different constituents; (ii) that knowledge by acquaintance with constituents does not explain or show us their manner of combination; (iii) that the epistemological independence there is between constituents and form - or structure - is founded upon an ontological independence in their natures. Russell does not state this thesis of independence between form and constituents in an explicit manner, but he maintains it as a constant - with various stages of development - as we shall presently see. In order to spell out the implications of the thesis an account of Russell's conception of the nature of constituents of propositions and that of the nature of form is required. We may begin with a rough general statement saying that Russell, since his early strict realist doctrines, holds that the constituents of propositions are particulars, qualities and relations. They are two kinds of 'entities' - particulars and universals, or things and concepts - that constitute an irreducible dual reality. Their manner of combination in propositions - i.e., their form - can be exhibited or exemplified by means of variables in a logico-symbolic notation. Russell in the middle writings of his logico-atomistic phase, draws the distinction between constituents and form in terms of "vocabulary" and "syntax". This is a distinction between non-logical words and logical words, or between empirical propositions and logical propositions - i.e., propositions with no constituents, formed only by variables.

In 'The Philosophy of Logical Atomism', Russell says that the latter kind of propositions will constitute a language

"completely analytic, and will show at a glance the logical structure of the facts asserted or denied. The language which is set forth in Principia Mathematica is intended to be a language of that sort. It is a language which has only syntax and no vocabulary whatsoever...if you add a vocabulary it would be a logically perfect language"(p.198).

The independence of 'syntax' and 'vocabulary' is stated explicitly, and frequently, by Russell with expressions such as

"logical propositions are such as can be known a priori, without study of the actual world"(IMP,p.204; see also OKEW,pp.67-68).

16. In the discussion of structure in Introduction to Mathematical Philosophy, to which we have referred, Russell not only maintains this independence of constituents and structure, but also draws some consequences that such independence involves as regards our scientific knowledge of the world. Let us consider these points briefly.

He says:

"the structure of the relation [complex] does not depend upon particular terms that make up the field of the relation. The field may be changed without changing the structure, and the structure may be changed without changing the field"(p.60).

A similar thought occurs in 'Logical Atomism' where Russell claims that it must be possible "that structure must be preserved" and

"that all the propositions of science should remain, though new meanings may be found for their terms" (p.340).

This appears to be possible because

"what matters in mathematics, and to very great extent in physical science, is not the intrinsic nature of our terms, but the logical nature of their relations"(IMP, p.59),

for

"individuality which always eludes words and baffles description...is irrelevant to science"(IMP,p.61).

In accordance with this Russell maintains that it is possible to know the syntax of a language (for syntax is a priori) without knowing its vocabulary. That is to say, syntax and semantics are somewhat independent of each other. Thus, given a statement of a symbolic (formal) language, we would have to face the following question: "what are the possible meanings of such a statement, and what are the meanings of the unknown words that would make it true?" Russell adds:

"The reason that this question is important is that it represents, much more nearly than might be supposed, the state of our knowledge of nature"(IMP,p.55).

For what really constitutes nature, i.e., its content, are the material elements which give meaning to the vocabulary of the language. These, Russell has said, in their essential individuality "elude words and baffle description". For this reason we may know much more about the form of nature than about the matter. That is also why

"what we really know when we enunciate a law of nature is only that there is probably some interpretation of our terms which make the law approximately true"(IMP, p.55).

It is important to bear in mind that the notions 'form' and 'structure' are not distinct for Russell, but taken as synonyms. This is something constant in his doctrines. There are innumerable examples that may serve as illustrations, but one may be provided from his article 'On Propositions' (1919). The first heading of the paper is "The structure of facts" but the term "form" is the one used in the discussion:

"Two facts are said to have the same 'form' when they differ only as regards their constituents"(p.286).

Nevertheless, Russell tends to use the word 'structure' when dealing with scientific questions, while the use of 'form' is primarily restricted

to logic, i.e., to the form of propositions. Although, even in these cases, he uses the terms at times interchangeably (Ibid.pp.309,315).

17. Russell attaches great importance to the notion of structure not only in logic, mathematics, and science - "In science, structure is the main study", he says (LA,p.340) - but also in philosophy. Russell claims that philosophy too is concerned with logical structures suggested a priori, i.e., hypotheses "which science is not yet in a position to confirm or confute" (Ibid,p.341). That is why "philosophy is the science of the possible" (the possible understood as that which is expressible in general propositions or forms, without the commitment as to the existence of the constituents to which they might apply). In this sense, Russell thinks, logic becomes the essence of philosophy and so indistinguishable from it (OSMP,p.84-85). Combined they are "philosophical logic" whose task is to establish an inventory of forms to be able to account for new facts in the world (Ibid.,also OKEW,p.52-53).

18. What conditions does Russell require of the nature of constituents and forms for their independence to be justified ? Although in the early realist writings Russell does not enter into a consideration of the nature of form as such, he nevertheless attributes certain properties to the nature of constituents - based on ontological and epistemological considerations - which will lead him, in 1913 to 'objectify' forms or structures to the extent of making them "logical objects". This means that forms have an ontological status distinct from that of constituents. Thus, there is an ontological independence between form and constituents because forms are ontologically prior and belonging to a realm separated and independent from the existing constituents that may fill those forms. Also, there is an epistemological

independence between form and constituents because forms can be known by acquaintance prior and independently of the acquaintance with the constituents that may fill those forms. It is in 1913 in Epistemology that Russell - in his attempt to account for the nature of forms and how we come to know them and understand the expressions which indicate them - is led to fully uphold this independence between form and constituents. Many aspects of the doctrine are anticipated in the earlier writings. In later writings the doctrine continues to be constant, as we shall presently consider.

19. Before entering into a discussion of the epistemological and ontological considerations that lead Russell to see constituents and form as independent, a general remark of an historical character can be made. Russell's account of constituents and form, i.e., of the proposition as a 'unity', may be divided in three stages. The first begins around 1900 when his Philosophy of Leibniz and the greater part of The Principles of Mathematics were written. In this period his theory of relations moulds to a great extent his views on the proposition. Relations for Russell are discovered to be genuine constituents of propositions, having a 'reality' independent of the terms they relate. Also, relations establish the propositional bond or bring about the 'unity' of the proposition. So, in this stage, which ends in 1913, the understanding of the constituents of propositions is, according to Russell, sufficient to account for the propositional unity; although he encounters great difficulties in such an account. His views by the time of Epistemology (1913) - which constitutes a period of its own - have changed. He then says:

'What is the proof that we must understand the 'form' before we can understand the proposition? I held formerly that the objects alone sufficed...' (MS, 216).

Now, this view, he adds, "no longer seems to me to be the case". The account of form as a logical object which Russell now propounds begins to be severely criticised by Wittgenstein in his 'Notes on Logic'. These criticisms have an impact on Russell that can be traced in his writings of 1914-1919, in particular in Our Knowledge of the External World (1914), 'The Philosophy of Logical Atomism' (1918), and Introduction to Mathematical Philosophy (1919). This constitutes the third period that closes with his 'Introduction' to the Tractatus (1922).

II. Early Views on Constituents and Form

20. Russell thinks with Frege (P,481) that a proposition cannot be regarded as a mere aggregate of constituents, such as a mathematical class. The proposition is not an aggregate but a unity brought about by a determinate 'relatedness' of its constituents. This is what makes the proposition capable of saying something true or false about the things its constituents stand for. It is clear that constituents and their relatedness cannot be accounted for independently of each other. In the last analysis, the view adopted as to the nature of constituents will determine the manner in which their 'relatedness' will be explained. We have claimed that Russell considers - in 1913 in an explicit manner but somewhat anticipated before - that the relatedness of constituents which brings them into a propositional unity (i.e., their form), is independent of the constituents themselves. What does Russell think about the nature of constituents that leads him to maintain such a view ?

21. The manner in which Russell characterises the ontological nature of the constituents of propositions is founded on semantical considerations that may be summarised in the principle: 'if a word means something there must be some thing which it means'. This may be taken as the fundamental principle of Russell's early platonic denotational theory of meaning as expressed in The Principles of Mathematics and as implicit in The Philosophy of Leibniz. It demands objective references for all words which occur in a proposition. The demand arises out of the consideration of the fact that anything occurring in a proposition can be made to function as a subject. Hence, if all words can be subjects of propositions, then they become something of which the proposition is about. For when a proposition is meaningful, can be understood, says something, its subject must be an entity of some kind of which something can be said. If this were not the case, the proposition would be about nothing, it would say nothing, and so it would be no proposition at all. In the case of certain existential propositions like 'the golden mountain does not exist' its meaning would have to be self-contradictory (so no meaning at all). For in order to deny the existence of the subject, its very existence has to be postulated. Thus, all subjects must be what Russell calls 'terms'. The word 'term' has a technical sense in The Principles, which means broadly 'entity'. It applies to the subjects of propositions, and so to all words because all of them can be subjects of propositions. Thus terms are the constituents of propositions, and all constituents of propositions are terms ("except for the word 'is' in some cases"). To say for example 'Kills is different from Kill' is to constitute 'Kills' into a logical subject, into a term, and so into an 'entity' of some kind (P,52). This is why Russell claims:

"Numbers, the Homeric gods, relations, chimeras, and four-dimensional spaces all have being, for if they were not entities of a kind, we could make no propositions about them. Thus being is a general attribute of everything, and to mention anything is to show that it is" (P,427).

22. Thus, from semantical considerations about the meaning of propositions, Russell is led to establish the ontological properties of the nature of terms. To say that a term is, is to say that it is "possessed of all the properties commonly assigned to substances" (P,47). A term is one, has numerical identity and numerical diversity from all other terms; it is immutable and indestructible, "no change can be conceived in it which would not destroy its identity and make it another term" (Ibid.). Its immutability also makes it simple, for "if the parts have been analysed as far as possible, they must be simple terms, incapable of expressing anything except themselves" (P,439). There cannot be ^{as} some philosophers advocate, Russell argues, a complexity proper to a conceptual realm which has not an equivalent in an ontological realm. There must be an exact correspondence between the ontological complexity and the conceptual complexity that logic or language may express. Russell cannot accept, therefore, a disparity between the ontological simplicity and the conceptual complexity that, say, Leibniz accepts for his monads. For although monads are ontologically simple substances, yet they are 'conceptually complex' because they are analysable in terms of their properties (in this difference, as regards the correspondence between the conceptual and the ontological, seems to lie the divergence of the two philosophers views on relations). Russell explicitly claims:

"All complexity is conceptual in the sense that it is due to a whole capable of logical analysis, but it is real in the sense that it has no dependence upon the mind, but only upon the nature of the object. Where the mind can distinguish elements, there must be different elements to distinguish" (P,439).

Terms cannot, strictly speaking, have parts, i.e., internal properties determining their nature. They are therefore simple. Terms are classified as things and concepts (P,48). Things can only occur in propositions as subjects. Concepts, which are subdivided into properties and relations, can occur either as subjects (terms) or as other constituents of propositions. But their ontological status as terms does not change with the different roles they can play:

"if A is ever not the subject, it is exactly and numerically the same A which is not subject in one proposition and is subject in another".(P,49).

If terms are not to maintain their nature regardless of their roles in different propositions, then, they must be capable of change. But then their identity and simplicity are in jeopardy. For only if there is some degree of complexity can anything change.

23. The substantial characteristics of terms require that their relations be external in character. Only if this kind of pluralism of terms holds can monism be avoided. For if relational properties are not 'external' to things, then they must be constitutive parts of their nature. Then all things would be ultimately related to one another, constituting a whole single reality. Individual things could neither exist nor be known independently of each other. That is what monism wants to maintain. This cannot be so because if mathematics is to be possible, we must understand first what our terms (units) are before we can know anything about their relations to other terms (units). Thus, Russell is led to argue for the "doctrine of external relations",⁽⁶⁾ according to which relations have a reality over and above the terms they relate. Relations are not reducible to properties of the terms they relate, as 'monism' and 'monadism' - the headings under

which traditional views are characterised - maintain (PL,27;P,212).

That relations are irreducible to properties of the related terms is shown by an analysis of relational propositions. The meaning of a proposition such as 'A is equal to B' - referring to, say, two lines of equal length - must be accounted for according to the traditional view, by the propositions 'A is of such and such a length', and 'B is of such and such a length'. But it is clear that the meaning of the original proposition is not given unless the addition that the two lengths are equal is made. This addition, Russell argues, involves a relation between the two lengths, which has to be accounted for. Then, if this relation has again to be reduced to predicates, we will be confronted with the same problem and thus led to a non-explanatory endless regress (P,214). Hence, relations are irreducible to predicates and, by being so, must be 'terms' with the substantial characteristics proper to them.

The traditional doctrine by claiming that relations are reducible to internal properties of things is also faced with a dilemma: if the internal properties define the nature of the thing, is the nature one with the thing itself, or is it different? If the thing is one with its nature, the totality of its properties is to be identified with the thing itself. This, according to Russell, leads to one of the following consequences: The subject is nothing other than the collection of its predicates. Here the notion of the thing (substance) seems to evaporate, for in giving the totality of predicates we have explained the thing in its totality. But, naturally, the question arises as to why that collection of predicates holds together and can be said to be predicates of one subject. This can be done by means of establishing relations among those predicates. In this case relations are not avoided. But there is another objection that Russell sees to this

proposal. If only properties are left, then Leibniz's very distinction between substance, as something permanent and enduring through time, and the properties inhering in it, must be denied. Therefore, a thing has to be distinguished from its nature (i.e., its properties) and so be externally related to it. This amounts to saying that a thing has contingently, and not essentially or necessarily, the properties it does have. Things have no 'internal' essences. The properties in terms of which a subject or thing is defined, do not necessarily pertain to the thing. This denies, Russell argues, the analytic character that definitions, or propositions about a thing's nature, have in Leibniz's views. Russell's early doctrine of 'externality' - which he always maintained - is the underlying ground for his theory of descriptions, and for the later theory of logical proper names that develops out of it. External relations are required if complexity and plurality as well as the ultimate simplicity of constituents of propositions is to be justified.

24. How does Russell account for the unity of the propositions given that its constituents are one, simple, have meaning in 'isolation', (their entities are their meanings), and are externally related ? For these characteristics seem to make constituents 'complete' (unlike the Fregean 'unsaturated concepts'). Russell clearly maintains that the constituents of a proposition such as, say, 'A is greater than B' are, 'A', 'B' and 'greater than'. These constituents by themselves cannot account for their relatedness in the proposition. The process of analysis shows this. When the analysis of such a proposition is terminated we are left with the independent constituents. That is, once the proposition is analysed its constituents can be enumerated, but do not form, then, a significant unity:

"A proposition in fact, is essentially a unity, and when analysis has destroyed the unity, no enumeration of constituents will restore the proposition" (P,57).

Thus, the unity of the proposition cannot be sought in its constituent simple terms as such (P,106). What are we to invoke to account for such unity? Russell believes that a distinction is necessary concerning the relation itself - or the relation as such - and the relation as relating (P,54). The relation as such is a 'term' with an ontological status independent of the terms to be related. But when the relation occurs in the proposition it makes a reference to the terms giving it its proper unity. In certain relational propositions, such as asymmetrical ones, the relation occurring as a relating relation also requires what Russell calls 'sense':

"A relational proposition may be symbolised by \underline{aRb} , where R is the relation and \underline{a} and \underline{b} are the terms; and \underline{aRb} will then always, provided \underline{a} and \underline{b} are not identical, denote a different proposition from \underline{bRa} . That is to say, it is characteristic of a relation of two terms that it proceeds, so to speak, from one to the other. This is what may be called the sense of a relation" (P,94).

If there were no such sense, the proposition \underline{aRb} would be identical to \underline{bRa} , for the constituents are one and the same, i.e., \underline{a} , \underline{b} , and \underline{R} . Thus the sense of the proposition, because it brings about a different unity with the same constituents, must pertain to the 'relation as relating'.

By having introduced the distinction between the relation as such and the relation as relating, Russell is confronted with the question as to the relation between the two. Is the latter 'an instance' of the former? The answer is in the negative. If relations had instances, relating relations would be particulars, but then the relations between the two would lead us to an endless regress, for a new relation would be required to relate the two relations if distinct. So Russell says:

"relations do not have instances, but are strictly the same in all propositions in which they occur"(P,55).

He confesses that although the distinction introduced is necessary to account for the unity of the proposition, he is unable to state exactly the nature of such a distinction. It is a matter of 'indefinability':

"a relating relation is distinguished from a relation in itself by the indefinable element of assertion which distinguishes a proposition from a concept"(P,99).

This leaves him with the problem unsolved. Later in 1910, he takes it up again in his early theory of judgement as propounded in 'On the Nature of Truth and Falsehood', and again in 1913 in Epistemology.

25. By way of summary some points may be made. Relations are important for Russell's early views on the proposition's constituents and form on at least three counts: (i) Because relations are 'irreducible' to properties of things, they are 'real'; they have an independent ontological status like things and their qualities. Thus, things, qualities and relations are the constituents of propositions. Things and their properties (i.e., their qualities or relations) are externally related. Things do not have internal properties which essentially or necessarily determine their nature. (ii) Because relations are irreducible to properties of things, and have a reality of their own, relational propositions are irreducible to subject-predicate propositions. This has important consequences for Russell: Logic is no longer of the subject-predicate or Aristotelian syllogistic nature, as it was believed to be. There are various forms of propositions. Although Russell does not discuss at this stage what is meant by forms (the problem is viewed under 'the unity' of the proposition), he understands by form the different combinations to which the distinct constituents give rise, i.e., subject-predicate, relational combination of one, two, three terms, etc..

All these are different forms of propositions. Once the relational ones have been 'discovered', other forms might also be discovered; the scope for possibilities is left open. This has for Russell a metaphysical corollary due to his conviction about the exact correspondence between the linguistic and the ontological: if there are relational propositions, then there are relational facts in the world which correspond to them and of which we did not know before. Facts in the world are no longer only of the kind 'something having some quality'. Metaphysics is not only of the 'substance - attribute' type. (iii) It is in terms of relations that Russell attempts to account for the unity of the proposition, i.e., the account of the manner in which constituents hang together. Constituents in propositions form a unity, which becomes simply an aggregate when analysis separates them. What can explain such a unity? This problem of the 'unity' of the propositional bond is in The Principles the ancestor of the problem of form which will occupy Russell in 1913 in Epistemology.

This remains a constant problem for Russell because the constituents of propositions (things, qualities and relations) are, in The Principles, like simple entities, ontologically independent of one another, objects of acquaintance capable of being known also independently of one another, which have no 'internal' properties determining their nature, for they have no nature. So, because it is possible to know them in isolation, this knowledge does not explain the manner of their combination in actual propositions. Since constituents are simple they are externally related, so they do not possess an internal demand determining their manner of combination. Hence, Russell does not appear to have an ultimate justification for organising his simples in categories. Furthermore, Russell's reasons for the distinction between 'particulars'

and 'universals' are unconvincing as F.P. Ramsey critically remarks:

"Mr. Russell would, I imagine, use two lines of argument ...The first would dwell on the great convenience in mathematical logic of his functional symbolism, of which he might say that there was no explanation except that this symbolism corresponded to reality more closely than any other. His second line of argument would be that everyone can feel a difference between particulars and universals..."(1931,p,122).

If the constituents of propositions are simple and their relations external and contingent, then all combinations are possible among them. There is nothing 'internal' to them determining possible combinations. This is what Wittgenstein came to reject by saying 'nonsense cannot be judged'⁽⁷⁾. But for the moment we leave this matter and pass on to a consideration of Russell's new doctrine as provided in his theory of descriptions.

III. Constituents and Form in the Theory of Descriptions

26. In 1905 Russell published his article 'On Denoting' in which a crucial change in his earlier theory of meaning is advocated. How does this change affect his views on the constituents of propositions and their forms? It is generally claimed that Russell's extreme Platonic realism was abandoned in 1905 with his theory of descriptions. This view is only correct in reference to certain expressions, i.e., those whose meaning can, in the light of the new theory, be determined contextually. But for an expression(s) whose meaning is not seen to be so contextually defined, it is still a 'Platonic meaning', i.e., its meaning is the entity it stands for with those substantial characteristics earlier assigned to it. So Russell's new theory is not strictly speaking

a 'radical change' but a revision of his earlier theory. For the crucial change in his views on meaning certainly does not affect Russell's Platonism in what refers to the constituents of propositions in general: things, qualities and relations. The Theory of Descriptions indeed involves a change in the principle that there must be an entity which every expression denotes, because not every word can be a genuine subject of a proposition. Now, in 1905, Russell confesses:

"'I think, therefore I am' is not more evident than 'I am the subject of a proposition, therefore I am'" (OD,p.48).

What the new theory shows is that certain expressions are 'disqualified' as subjects of propositions since they lack ontological status. Put differently, it seems to be unnecessary to treat that which lacks the ontological status of 'thing' as a real subject of a proposition. Only a genuine subject has such an ontological status of being a 'thing'. The Theory of Descriptions is a theory about subjects; for this reason nothing about the intrinsic nature of qualities and relations is revealed in it. They are accepted as constituents of propositions (OD,p.55-56).

27. Nevertheless, the theory will show, with reference to our present concern, that 'new forms' are discovered and that this comes about through the process of analysis, establishing what are the real subjects of propositions and the manner they are 'expressed' in propositions by being either 'named' or 'described'. In 1904, Russell published a long article on Meinong of which W.V. Quine says:

"In it he criticised details of Meinong's system, but still protested ... [not at all] against the exuberance of Meinong's realm of being" (1971,p.5).

This is not totally accurate, for the article already contains some protests in which Russell expresses puzzlements about that realm. If we take 'A' as standing for the expression 'the golden mountain' then we can

have the following:

"If 'A exists' is false, not only A does not exist, but also, we are to suppose, A's existence does not subsist; while, if 'A does not exist' is false, A's existence does subsist. The point involved, therefore, comes to this: that it is hard to regard A's non-existence, when true, as a fact in quite the same sense in which A's existence would be a fact if it were true"(MICA,p.523).

This state of affairs "is intolerable", Russell claims, and its abolition lies in the right use of propositional functions and the sharp distinction between names and denoting phrases. Denoting phrases such as 'the present King of France' or 'the golden mountain', because they appear to function as names without being so, give rise to puzzles which may be summarised in Russell's own words:

"how can a non-entity be the subject of a proposition ?"
(OD,p.48).

Subjects can only be entities and their names have meanings if there are such subjects. They must mean in isolation, or 'essentially denote'⁽⁸⁾. Descriptions, on the other hand, do not need to denote to contribute to the meaning of the proposition in which they occur; they 'contextually denote'; they are 'incomplete symbols' or, as Russell also says, a description denotes "solely in virtue of its form"(OD,p.41).

28. How, then do descriptions, while not denoting, contribute to the meaning of the proposition in which they occur ? The analysis of a proposition such as 'Scott is the author of Waverley' illustrates this by its expansion into a conjunction of existential statements such as:

- (i) There is an x such that x wrote Waverley and
- (ii) for all y, if y wrote Waverley, y is identical with x and
- (iii) x is identical with Scott.

In symbolic terms: $(\exists x)((Fx \ \& \ (x) \ (y) \ (Fx \ \& \ Fy \ \rightarrow \ x=y) \ \& \ Gx)$, which can be shown to be equivalent to: $(\exists x) \ (\ (y) \ (Fy \ \leftrightarrow \ y=x) \ \& \ Gx)$.

The variable 'x' which takes the place of the subject refers to it indefinitely by means of the existential quantifier. In this propositional function, a variable can be substituted by a name; the name would simply denote, so that when an entity or an instance can be found for which the properties ascribed to x are seen to hold, the whole proposition is true. When there is not an instance to satisfy the function, the conjunction is false. This makes clear that the meaning of the sentence is not dependent on the existence, or non-existence, of the entity which satisfies the propositional function. The proposition has a meaning before it is determined to be true or false, and only because it has such a meaning can it be either true or false. And what is it that confers meaning on such propositional functions? We may ask. The answer must be: form, i.e., the logical apparatus which exhibits it. Here, the logical symbolism accounts for what we actually mean in ordinary language when we use the unanalysed proposition equivalent in meaning to the meaning of the conjunction which analyses it. That is why, Russell claims, without logic we cannot know or discover the meaning of what we say:

"Propositional functions are involved in ordinary language in a great many cases where one does not usually realise them" (PLA, p.231).

29. That a propositional function contains a name variable and certain property (or properties), which could be attributed to the instance of the variable without this attribution guaranteeing the existence of such an instance, accords with - and presupposes - Russell's idea about the external relations that hold between a thing and its properties. For the propositional function has a sense because it can be either true or false. But this is possible because it must be assumed that there are subject(s) or particular(s) or entity(ies) to which the property may or may not be attributed. The quantified variable refers indefinitely.

If there were no entities at all, the propositional function could not have a meaning. This means, as Russell explicitly claims, that the property may or may not hold (contingently) for an entity. That is why the truth or falsity of the propositional function is of the kind that pertains to predication. This is possible because thing and property are related to each other contingently or externally. For this reason, the variable can be seen to stand for an entity as a name does, only 'naming', i.e., standing for the substance of the 'this' thought of as stripped of its properties. Thus propositional functions presuppose that there are entities and that these can be known - and so their existence is guaranteed - by being acquainted with them, and that the entities and their properties are contingently related.

Russell claims that constituents of propositions must be objects of acquaintance (OD,p.55-56), so that they will be regarded as entities which certainly exist, "things we have presentations of" (Ibid.p,41). Although Russell does not at this stage go into the nature of acquaintance, this condition is retained as the account of meaning of constituents of propositions. This later leads him to hold that the ultimate entities of acquaintance must be sense data, since the entities standing for ordinary proper names which are constructions out of them, may not exist. Thus, a distinction between ordinary proper names and logical names must always be maintained.

30. In some later expositions of his theory, Russell appears to use indiscriminately ordinary proper names as logical names. This has been interpreted by D.F. Pears to mean that Russell allows for the possibility of the usage of an ordinary proper name as "thinking of its actual denotation directly without the intervention of any description".

This view is challenged by A.J. Ayer in his Analytical Heritage; Ayer claims that the lectures on 'The Philosophy of Logical Atomism', on which Pears relies, are popular ones and what really interested Russell then was to make clear the distinction between names and descriptions (pp.41-42). There is something further which can be added to this interpretation.

The fact that Russell uses ordinary proper names in his account of the theory may be seen to serve, as Ayer says, to clarify the contrast between name and description. But this is only in order to exhibit the appropriate logical form of subjects named or subjects described. On the occasions that Russell uses ordinary proper names as logical names, he does not seem to be preoccupied about discussing the inner nature of the constituents. Rather, he at times explicitly assumes - as a requirement of analysis and the principle of acquaintance - that the constituents (names) are simple (see Intr.TLP,p,xi). But whether they are or are not in fact so, is a matter that Russell will attempt to establish when he is directly concerned with the problem of simples and acquaintance.

31. To sum up. By means of the distinction between descriptions and names, the grammatical form of sentences is distinguished from its real form. Descriptions may appear in grammatical form to function as subjects; but their analysis shows that this is not so; they are properties that may be attributed to subjects. What logical form is, its nature, is not accounted for in the theory (nor is anything said about the unity of the proposition), but form is exhibited by the logical apparatus of propositional functions. How this logical form is discovered is, as the theory makes clear, a paradigm of logical analysis which determines how constituents can be denoted (named or described), i.e., what the genuine constituent subjects of propositions are. The distinction between 'essential denoting' and 'contextual

denoting' is the keeping of the important distinction between logical-words whose meaning is always contextual, and non-logical words (subjects, qualities and relations), the constituents of propositions, whose meaning is not so. So as regards the constituents of propositions, Russell remains a Platonist. The early doctrine of external relations which demands of the thing not to be complex and so externally related to its properties, underlies both the theory of descriptions and Russell's subsequent theory of names as simply denoting or not having connotations. These views are closely connected to his epistemological theory of acquaintance.

Russell, through the theory of relations, has discovered 'new' forms of propositions which reveal new 'facts' and so new 'constituents' in the world. Traditional metaphysics was misled by trusting the forms suggested by ordinary grammar; this is newly confirmed in the theory of descriptions. Though now no new constituents have been discovered, new forms, which account for the meaning of constituents, have. This is a new confirmation of what Russell constantly notes: misleading grammar leads to metaphysical error.

32. What consequence does the theory of descriptions have for isomorphism or the way language represents reality? Russell does not seem to attempt an account of the ordinary usage of language in his theory of descriptions. But in it, it becomes clear that ordinary grammar is what misleads us as to what the true form of facts is. Hence, the reconstruction of ordinary grammar into a clearer grammar or into its real logical form serves the purpose of a truer representation of the structure of the facts. A logical syntax in which logical forms are clearly exhibited would be the accurate means of representing the structure of facts. Ordinary grammar would be inaccurate because misleading. It misleads us because of its grammatical form. Later,

Russell will also say that it will mislead us because of its vocabulary. Logical syntax will not simply disclose the real form of language, but must become a 'substitute' for it, to which all language has to approximate. The discussion of this matter we postpone for the moment. It will be taken up again in the final chapter. Let us turn now to consider Russell's views on acquaintance and its relation to his 'two-world' theory: the a priori world and the empirical world.

IV. Acquaintance and Empirical Knowledge

33. In the account of descriptions, Russell has claimed that:

"in every proposition that we can apprehend (i.e., not only in those whose truth or falsehood we can judge of, but in all that we can think about), all the constituents are really entities with which we have immediate acquaintance" (OD, p.56).

Acquaintance is the ultimate basis of our knowledge; for this reason Russell believes that the distinction between 'acquaintance' and 'knowledge about' which he makes in 'On Denoting' has important consequences not only for logic and mathematics but also for the theory of knowledge. The 1911 essay 'Knowledge by Acquaintance and Knowledge by Description' is Russell's first detailed account of the distinction. Similar views occur again in The Problems of Philosophy (1912), of which Russell says "the essentials are all there" (Clark, 1975, p.190). The published part of his 1913 Epistemology, i.e., 'On the Nature of Acquaintance' and 'Definitions and Methodological Principles in Theory of Knowledge', as well as the unpublished part, are also important for an understanding of Russell's views on the nature of acquaintance and its data.

34. What is the role that acquaintance plays in Russell's philosophy ? On the one hand, as he says in 'On Denoting' (and it is anticipated in The Principles), acquaintance is the manner in which the constituents of propositions must be known. Hence, an account of the meaning of words and so, of the meaning of propositions and our understanding of them depends on it. But, ultimately, the role of acquaintance has to be seen in connection with truth.

"All our knowledge, both knowledge of things and knowledge of truths rests upon acquaintance as its foundation" (PP,p.26).

Russell claims that acquaintance itself is not knowledge of truths, but it provides us with the basis for our knowledge of truths, in particular for the self-evident truths on which all other knowledge of truths depends.

A.J. Ayer has noted that one of the assumptions which underlies Russell's doctrines is his quest for a special class of propositions which may serve as premisses for all our beliefs concerning matters of fact. The truth of these propositions is 'certain' in so far as there are no other premisses from which we could legitimately infer that they are false (1971,p.12). In this respect Russell says in his Manuscript,

"there must be some beliefs of whose truth there can be no doubt, though they are not obtained by inference; if this were not the case, there could not be such a thing as knowledge. Such beliefs...must be recognisable by inspection...They must therefore involve reference to facts with which we are acquainted" (MS,350).

Although acquaintance is the basis of knowledge of things and of knowledge of truths, these two kinds of knowledge are "logically independent" Russell says (PP,p.25). This independence is to be maintained in order to account for the priority of meaning over truth. Meaning and truth cannot merge into each other. If they do, our capacity to understand a proposition without knowing whether it is true or false would be in jeopardy. Meaning must be prior to truth.

There are at least three questions that may be asked in relation to this doctrine and which will be our concern in what follows. These are: How does Russell account for the priority of meaning over truth as regards our knowledge of facts? Why is acquaintance with facts required in his theory? Is not acquaintance with constituents a necessary and sufficient condition in the account of our understanding of empirical propositions and in the account of 'true knowledge'?

35. Consistent with earlier views, Russell says in The Problems of Philosophy:

"Every proposition which we can understand must be composed wholly of constituents with which we are acquainted" (PP, p, 32).

And also,

"One way of discovering what a proposition deals with is to ask ourselves what words we must understand - in other words, what objects we must be acquainted with - in order to see what the proposition means" (PP, p. 60).

Thus, it appears that the necessary and sufficient condition for our ability to understand a proposition is our acquaintance with constituents. By acquaintance Russell means our direct awareness of those constituents

"without the intermediary of any process of inference or any knowledge of truths" (PP, p, 25).

or the "direct cognitive relation" between object and subject.

Knowledge by description, of things with which we are not acquainted involves "some knowledge of truths as its source and ground" (Ibid.).

Ultimately, knowledge by description is reducible to knowledge by acquaintance as its foundation (PP, p, 32). The constituents of propositions with which we must be acquainted are of two sorts: (i) particulars, which for Russell now are sense data; (ii) universals, which include both qualities and relations (PP, pp. 28, 62). Sense-data are

given in our direct confrontation with physical objects, which themselves are constructions of sense-data. So when confronted with my table, for example, the sense-data which make up the appearance of my table are things with which I have acquaintance, things immediately known to me just as they are (PP,p.25). We become acquainted with the qualities, which are exemplified in sense-data, by way of "abstraction". If we see, say, a white sense-datum, what is then given to us in acquaintance is the particular patch only. But by seeing similar patches we learn to abstract the whiteness they have in common, and in learning to do this we come to be acquainted with whiteness as such (PP,p.58). A similar process is followed in the case of relations. Russell argues that although, in some cases, e.g., asymmetrical relations such as 'greater than', the apprehension may require more power of abstraction than in the case of qualities, nevertheless this

"appears to be equally immediate and (at least in some cases) equally indubitable"(PP,p.59).

In what exactly consists the difference between acquaintance with particulars and universals Russell does not explain in detail, but he claims that since these two kinds of entities differ our knowledge of them also differs. Thus, knowledge of universals is what Russell calls a priori:

"all our a priori knowledge is concerned with entities which do not, properly speaking, exist, either in the mental or in the physical world. These entities are such as can be named as parts of speech which are not substantives; they are such entities as qualities and relations"(PP,p.50).

Although knowledge of universals is gained by a process of 'abstraction' (e.g., by seeing white patches we learn to abstract 'whiteness'), never-

theless, the ontological status of universals is independent of that of particulars, since they are different kinds of entities; universals belong neither to the mental nor to the physical world as particulars do; they belong to the a priori. Although predicates and relations "suggest a structure" (LA,p.337) and so make reference to the particulars to which they may apply, they are ontologically independent. Thus, here is not an ontological priority of particulars over universals, nor a priority of universals over particulars. Both universals and particulars are independent because they belong to two different worlds. The two modes of knowledge by acquaintance with constituents (empirical and a priori) that we possess yield the two kinds of knowledge of truths we have concerning the empirical world and the a priori world. Thus Russell's commitment to a two-world theory of knowledge is also a commitment to a two-world theory of being. The 'two-world' ontological realm Russell describes as follows:

"The world of universals, therefore, may also be described as the world of being. The world of being is unchangeable, rigid, exact, delightful to the mathematician, the logician, the builder of metaphysical systems, and all who love perfection more than life. The world of existence is fleeting, vague, without sharp boundaries, without any clear plan or arrangement, but it contains all thoughts and feelings, all the data of sense, and all the physical objects ...the truth is that both have the same claim in our impartial attention, both are real, and both are important to the metaphysician. Indeed no sooner have we distinguished the two worlds than it becomes necessary to consider their relations" (PP,p.57).

How does Russell account for the relation between the two worlds ?

How does his account do justice to the charge he makes against the traditional Kantian a priori which, Russell claims, cannot explain

"our certainty that the facts must always conform to logic and arithmetic" (PP,p.49).

37. A consideration of what a priori truths are and what empirical truths are will show how the two worlds may be related. Since the a priori world is a world of no particulars but of universals, a priori truths are only truths about universals. All a priori truths constitute a priori knowledge (PP,p.59). Among these truths, Russell includes the scientific principle of induction, the principle of inference, and the so-called laws of thought (which for Russell are also laws of things which permit us to think truly about them (PP,p.40)). The general principles of pure mathematics are also a priori, and logic is a priori (PP,p.43). Thus no proposition having particular constituents composing it can be said to belong to logic. There are a priori general propositions, like 'all men are mortal', in which instances of universals are mentioned. This a priori general proposition expresses the connection between the universal man and the universal mortal (PP,p.61). It is to be distinguished, Russell argues, from an empirical generalisation. What makes the two kinds of propositions distinct is the different kind of evidence on which they are based. There are still other a priori propositions in which instances of universals do not enter as constituents, thus

"the knowledge of such propositions only require a knowledge of the relations of universals, and does not require any knowledge of instances of universals in question" (PP,p.62).

These 'constituentless' propositions appear to anticipate what Russell later calls in Epistemology 'pure forms', i.e., the logical propositions known by "logical experience", which may be regarded as a kind of a priori knowledge.

Empirical knowledge

"tells us of the existence and some of the properties of particular things with which we are acquainted" (PP,p.86).

This kind of knowledge ultimately depends, Russell contends, on the a priori knowledge of truths of universals. For our knowledge of, say, physical objects, involves the principle that sense-data are signs of physical objects. This principle itself is a connection of universals, and

"it is only in virtue of this principle that experience enables us to acquire knowledge concerning physical objects' (Ibid.).

Empirical knowledge also depends on a priori knowledge in enabling us to draw consequences - by the principle of inference - from the particular facts given in empirical knowledge.

38. The particular facts which are given in empirical knowledge may be known in two ways (i) by means of a judgement, in which its several parts are judged to be related as they are in fact related; (ii) by means of acquaintance with the complex fact itself. The first kind of knowledge is liable to error; while the second is not, for acquaintance with facts - Russell calls "perception" - can only occur if there is really such a fact (PP,p.79). The first mode of empirical knowledge of facts is described in Russell's multi-object theory of judgement which may be briefly summarised as follows. In every act of judgement there is a mind which judges and terms about which it judges. Thus, in a judgement concerning a fact such as Socrates loves Plato, the subject A judges about the object Socrates, Plato and loves. In order to be able to judge the subject A must be acquainted - have a dual relation of presentation - with each of the constituents. If the constituents, Socrates, Plato and loves are symbolised by 'a', 'b' and 'R', then the subject A, when judging about a, b and R, judges that these objects are related in a determinate manner constituting a fact

such as aRb . This judgement may be expressed as 'A judges that aRb '. Here the relation of judging - let us call it 'J' - holds between the constituents of the judgement A, a, b, and R arranging them in a particular manner. The order of the constituents of the fact aRb is established by the 'sense' of the relation R. The 'sense' of the relation J determines the order of relation between A, a, b and R. In the act of judging, the relation R is a constituent just as any other constituent. J, on the other hand, is the "cement" which brings all the constituents into relation. If the judgement is true, the constituents of the complex whole aRb - the objects of the fact - are related in the same order as they are related in the judgement. The complex fact aRb , which makes the judgement true, contains R as the "cement" binding together the other two objects. If the judgement 'A judges that aRb ' is false, then as the complex fact aRb does not exist, R does not have the function of "cement". It simply occurs in the judgement as a constituent (PP, p.74).

39. This account of judgement allows for the possibility of error because it allows for the constituents of the judgement to be related in a manner which does not obtain in reality. Hence it explains how a false proposition can have meaning without being true. Russell thinks that if the edifice of knowledge is founded upon this kind of contingent judgements, there cannot be indubitable true knowledge. That is to say, we are not capable of establishing the true indubitable premisses which knowledge requires. Without these premisses the foundations of knowledge do not have the character of indubitable certainty. Thus, it appears that in order to guarantee self-evident truth, the acquaintance that the subject must have with each of the

constituents is a necessary but not a sufficient condition. For there is always the possibility of arranging the constituents in the judgement in a manner different (even nonsensical) from that which they are arranged in the fact. Hence, a further condition is required to guarantee that the mode of arrangement of constituents in the judgement be the same as in the fact, if truth is to be of a self-evident indubitable kind. Russell believes that this condition is fulfilled by the judgement of perception whereby we become acquainted with facts or "complex objects". That there must be acquaintance with complex objects or facts in perception is a claim that Russell not only makes in The Problems (p.79) but one he has earlier explicitly expressed in Principia Mathematica as follows:

"Let us consider a complex object composed of two parts a and b standing to each other in the relation R. The complex object 'a-in-the-relation-R-to-b' may be capable of being perceived; when perceived it is perceived as an object. Attention may show that it is a complex, we then judge that a and b stand in the relation R. Such a judgement being derived from perception by mere attention, may be called a 'judgement of perception'. This judgement of perception, considered as an actual occurrence, is a relation of four terms, namely a and b and R and the percipient. The perception, on the other hand, is a relation of two terms, namely, 'a-in-the-relation-R-to-b' and the percipient. Since an object of perception cannot be nothing, we cannot perceive 'a-in-the-relation-R-to-b' unless a is in the relation R to b. Hence, a judgement of perception, according to the above definition must be true" (1910, I, p. 43) ⁽⁹⁾.

In the judgement of perception what is secured is self-evident truth as Russell says in The Problems:

"In all cases where we know by acquaintance a complex fact consisting of certain terms in a certain relation, we say that the truth that these terms are so related has the first or absolute kind of self-evidence, and in these cases the judgement that the terms are so related must be true" (p.79).

A year later, in 'On the Nature of Acquaintance' - the first part of the intended book on Epistemology - Russell also writes:

"I think however that some facts are experienced, namely those which we see for ourselves, without relying either upon our own reasoning from previous facts, or upon the testimony of others. These 'primitive' facts, which are known to us by immediate insight as luminous as that of sense, must, if I am not mistaken, be included in the original matter of experience. Their importance in the theory of knowledge is very great"(p.132).

As Russell has said in The Problems the 'great importance' of acquaintance with facts for the theory of knowledge lies in guaranteeing self-evidence upon which the whole edifice of truth must be founded. This requirement of self-evidence applies not only to empirical knowledge but to logical knowledge as well; because

"perceived facts are not always thus particular: general logical facts, for example, are often such as can be perceived" (DMPTK, p.585).

40. What conditions does the perception of facts involve? In the first place, it must be said, as D.F. Pears has noted (1967, p.180), that Russell cannot be charged with committing the mistake of maintaining that a single occasion of confrontation with an object can both give a person understanding of the meaning of a word and give him factual knowledge expressed in a proposition containing that word. If this were the case, meaning and truth would entirely merge. As Pears argues, direct confrontation involves either learning the meaning of words or using the words already learnt in previous confrontations. But these two acts cannot happen in one and the same confrontation. Only a 'prior' knowledge of the meaning of words makes possible their application in propositions where we state truths about particulars with which we are acquainted. Although the distinction between a 'learning-confrontation' and an 'application-confrontation' can be made in respect of particular

words for objects - even in the case of a judgement of perception -, such a distinction does not seem available, in Russell's own terms, in respect of their structure in propositions or in reference to the manner in which constituents combine. Why is it necessary ?

A judgement of perception guarantees self-evident truth because it can only be made if the fact that makes it true exists; also, Russell claims, in perceiving the fact the author of the judgement cannot go wrong, since he cannot arrange things in a way different to that in which he perceives them to be arranged in the fact. But a question arises as to the manner in which the perceived arrangement of things is known. For the acquisition of knowledge of the meaning of the individual words in prior confrontations cannot show their structure or combination in propositions if meaning and truth are not to merge. In other words, if the learning of the meaning of words in isolation (the 'learning-confrontation') does provide us with knowledge as to the possible arrangements of things, then the things must have 'internal properties' determining those possible arrangements. Therefore, in this case, the learning-confrontation does necessarily involve the acquisition of truths, so that the same act of confrontation would give a person both understanding of meanings of words and factual knowledge about them. This cannot be so. The things standing for words are simple and cannot be apprehended under particular properties. Things and their properties are externally related. Hence knowledge of the meaning of words in isolation is independent of knowledge as to their manner of combination in propositions. Even in a judgement of perception which must be true, the source of the proposition's meaning cannot be the same as that of its truth.

An example may serve to illustrate this. The truth of a proposition

which expresses a property about a complex individual, say a cat, such as 'Mistofelees is black' will be derived from the existence of the complex object 'The blackness-of-Mistofelees', while its meaning has to be accounted for in terms of the words taken separately. These are the constituents with which we must be acquainted already. Nevertheless, their actual combination in the fact - which guarantees the truth of the judgement of perception - must become known either in the actual act of perception or prior to that act. If the former alternative holds, then the source of meaning of the proposition (i.e., the understanding that certain constituents are related in such-and-such a manner) as well as the source of its truth merge in the same act of perception. If the latter alternative obtains an account of the prior or presupposed knowledge of the structure of propositions must be provided.

41. At the time of The Problems Russell has not yet come to be concerned with the above alternative that his views on constituents and his notion of perception involve. For if acquaintance with the constituents themselves does not provide the knowledge of the internal structure of the fact in which they are combined, what does provide such knowledge? This may be taken to be one of the central questions that leads Russell to his account of form in Epistemology, for he says there:

"What is the proof that we can understand the 'form' before we can understand the proposition? I held formerly that the objects alone sufficed, and that the 'sense' of the relation of understanding would put them in the right order; this, however, no longer seems to me to be the case" (MS, 216).

The reason he gives for such a change of view is that in order to understand any proposition - i.e., the manner in which certain constituents are said to combine - such as 'A and B are similar', it must be known what is supposed to be done with A and B and similarity

to bring them together under certain arrangements, such as 'xRy'. Russell claims that in an act of perception, i.e., when what is understood is seen to actually obtain in reality, the 'form' of what is understood is given in the existing complex fact. But if this were always the case, Russell recognises, falsehood and error could not be allowed for. Furthermore, propositional meaning and truth would collapse. Therefore, a way out must be found. Russell says:

"In an actual complex, the general form is not presupposed; but when we are concerned with a proposition which may be false, and where, therefore, the actual complex is not given, we have only, as it were, the 'idea' or 'suggestion' of the terms being united in such a complex; and this, evidently, requires that the general form of the merely supposed complex should be given" (MS, 216-217).

These views will lead Russell to claim that even the self-evident truth of an empirical fact perceived must, after all, depend on another premiss: its form must already be given. Form, like universals, cannot belong to the empirical world of particulars; consequently, it must belong to the a priori world. Hence, in accordance with what Russell has said in The Problems, knowledge of empirical propositions - even knowledge of propositions containing instances of universals - depends on the priority of the knowledge of form. It is not sufficient to be acquainted with constituents alone; But how is this form given, and what is its nature? Russell's attempt to answer this question in Epistemology is what will be considered in the next chapter.

CHAPTER TWO

RUSSELL'S 'EPISTEMOLOGY': THE MEETING POINT

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1. The 1913 Manuscript on Epistemology may be regarded as the further point reached by Russell in the theory of the proposition, and the starting point for Wittgenstein. We may recall that Russell says in The Problems: "Every proposition which we can understand must be composed wholly of constituents with which we are acquainted" (p.32). In Epistemology having realised that acquaintance with constituents is not enough, Russell notes that acquaintance with form is also required; that is why the comprehensive relation which brings the

"constituents and the form into relation with each other ...is the essential thing about the understanding of a proposition" (MS,208).

Russell's development up to 1913 may thus be seen as a movement from 'constituents' to 'constituents and form'. Wittgenstein's, on the other hand, begins with 'constituents and form' and moves on to 'constituents'. In 'Notes on Logic', once he has assimilated Russell's problems in Epistemology and reacted to them by way of criticism, Wittgenstein writes:

"We understand a proposition when we understand its constituents and forms" (p.94; cf. pp.98,105).

The Editors of the Notebooks refer us to the connection this remark has with 4.024 of the Tractatus which runs:

"To understand a proposition means to know what is the case if it is true. (One can understand it, therefore, without knowing whether it is true). It is understood by any one who understands its constituents".

At the time of 'Notes on Logic' both Russell and Wittgenstein share the

belief that in order to understand a proposition one has to understand its 'indefinable' elements, and these are constituents and forms.

2. In this chapter we shall consider in what sense 'constituents' and 'forms' are meant in each philosopher's doctrine, and why Russell's own doctrine is unconvincing to Wittgenstein. His early reactions to Russell's views already contain the seeds that lead Wittgenstein into the Tractarian thesis that a proposition is understood if its constituents are understood. What becomes of forms, or of form, in the process? Let us first consider Russell's doctrines in his Epistemology and then move onto Wittgenstein's reactions to them.

I. Acquaintance and Logical Knowledge

3. We have seen that one of Russell's fundamental tenets is that all knowledge has acquaintance as its foundation, and this, Russell believes, applies not only to empirical knowledge but also to logical knowledge. In this spirit Russell in Epistemology attempts to account for our understanding of propositions by considering the role that logical knowledge plays in this understanding. He holds that knowledge of logical terms, knowledge of logical propositions and of logical truth must be founded on acquaintance. So his investigation is

"concerned with the basis of acquaintance that must underlie our knowledge of logic" (MS, 181).

It is on logical knowledge, and for that matter, on the understanding of logical propositions or complexes (i.e., those containing no constituents) that the understanding of empirical propositions is seen

to depend. We may advance the view that Wittgenstein's endeavour and achievement is precisely to reverse this order. The answer to the question about the relationship between logical propositions and empirical propositions, fundamental as it is, is not the first aim to be attained in Russell's Epistemology. It has first to be established what logical truth, and the understanding of logical propositions consists in.

Russell's means of establishing 'ultimate' truth in logical knowledge is the same as in the case of empirical knowledge, i.e., acquaintance. This is the only means to lead to self-evident truth, Russell contends:

"The importance of the understanding of pure form lies in its relation to the self-evidence of logical truth" (MS, 250).

The only firm basis that any knowledge of truths, whether empirical or logical, can have is self-evidence; this is the goal that must be achieved. It is there that necessary truths not liable to error, must lie.

4. In Epistemology Russell regards 'pure forms' as 'logical objects'. Various questions may be asked regarding them: What is the nature of these logical objects with which we must be acquainted, and in what does acquaintance with them consist? Why is the understanding of form important in connection with self-evident truth? What is the relationship between the logical objects as components of propositions and other non-logical constituents or ordinary propositions? Let us deal with these questions beginning with the last.

There are various reasons why forms, or 'logical objects', are required in propositions in addition to their constituents (i.e. names, predicates and relations). Something connected with this has already been

said in the previous chapter. It may be recalled now. Russell, since The Principles, maintains the unity of proposition. This unity, he also holds, cannot simply be accounted for in terms of the acquaintance we must have with constituents, for this does not provide knowledge as to the manner of their combination. Before 1913 this unity of the proposition is accounted for in terms of the relating relation - of which Russell never succeeds in giving a clear explanation. Now he realises, that in order to understand a proposition such as 'A and B are similar', it is not enough to be acquainted with its constituents, A, B, and similarity, and regard 'similarity' as the relating relation when the proposition is a unity. We also need to

"know what is supposed to be done with A and B and similarity, i.e., what it is for two terms to have a relation" (MS, 217).

Then, if we do understand 'A and B are similar', we must have knowledge of an abstract relation which is distinct from similarity and from the relating relation. Such a knowledge is presupposed in the understanding of any proposition of that form, and if the proposition is true, such a relation must exist, for it is what makes the proposition possible as a unity (Ibid.).

The word 'relation' for Russell, does not stand for any particular instance of a relation. It expresses the pure form that must be contained in any proposition atomic or molecular. It "is the way in which the constituents are put together" (MS, 183). The pure form of the atomic relational proposition is expressed by 'something has some relation to something', where 'something' stands for no entity. So it is the meaning of the logical term 'relation' which has to be accounted for (MS, 212). That is to say, 'something has some relation to something' has no constituents, no particular things or particular relations, so it

is 'a form' - or a logical proposition. Pure forms are what logical terms such as 'predicate', 'relation', 'dual complex', 'or', 'not', 'some', 'all' stand for, (MS,186,190), i.e., the so-called logical indefinables or logical constants. How are those notions indicating logical forms arrived at? Forms are attained by a process of abstraction or 'utmost generalisation'. That is, by repeatedly substituting variables for constituents one reaches an expression containing no constituents - this expression may be symbolised by 'xRy'. This is the pure form of the dual complex i.e., 'something has some relation to something'. Other forms may be arrived at by the same process (MS,183).

Why are forms considered 'logical objects'? Here Russell's Platonism makes its contribution. Forms have no constituents and they are not constituents themselves (i.e., names, properties and relations). Yet the terms which express them are 'ultimate' or undefinable. These must have a meaning. We must know this meaning by acquaintance (the only way to reach ultimates), where the direct subject-object relation obtains; so it must be an 'object' of some kind. That is to say, Russell argues, as he has done on other occasions, from the epistemological fact of our understanding the meaning of notions, such as 'relation' 'predicate' 'dual complex' etc., to the ontological status of their meanings, i.e., to entities of some kind or other which must stand for those notions:

'...the right logical account of 'form', but whatever this account may be it is clear that we have acquaintance (possibly in an extended sense of the word acquaintance) with something as abstract as the pure form, since otherwise we could not use intelligently such a word as 'relation'" (MS,184; see also 186).

Russell tells us that it is not an easy matter to detect the 'objects' which terms like 'relation', 'predicate' must mean (e.g., MS,185).

Nevertheless, he maintains, the existence of such objects cannot be doubted. Logical indefinables must have a meaning with which we are acquainted. On the basis of this there must be "logical experience" or "logical intuition" to provide such an acquaintance (MS,181,186,190).

5. Forms determine the manner in which constituents are combined. The knowledge of constituents by themselves, Russell contends (e.g.,MS, 185,217), does not provide us with knowledge as to how the constituents are to be combined in the proposition. That is why acquaintance with the manner of combination is presupposed and so independent of acquaintance with the constituents themselves. So Russell now explicitly states his views about the independence between form and constituents: what we have called 'the thesis of independence' (see above p.30ff.). By this Russell means that the knowledge of forms, acquaintance with them, is independent of acquaintance with the constituents that may fill those forms. Thus, he argues that in a proposition such as "Socrates precedes Plato" (MS,185) or (what is the same) in "A precedes B"

"It is obviously necessary that we should know what is meant by the words which occur in it, that is to say, we must have acquaintance with A and B and with the relation 'preceding'. It is also necessary to know how these three terms are meant to be combined; and this ...requires acquaintance with the general form of the dual complex" (MS,205; also 208,214,217,etc.).

A logical priority of acquaintance as 'logical experience' is conceded over acquaintance as 'empirical experience':

"Acquaintance with logical form, whatever its ultimate analysis may be, is a primitive constituent of our experience, and is presupposed, not only in explicit knowledge of logic, but in any understanding of a proposition"(MS,186; also 244).

Since constitutents and forms are different kinds of objects they are

known by different kinds of acquaintance; in sensation we have acquaintance with sensible particular things; acquaintance with universals (predicates and relations) is described by Russell as conception; it is by formal acquaintance, described also as logical experience or logical intuition, that we come to know logical objects (MS,188). Following the terminology of The Problems the latter two would be a priori knowledge. There is no clear specification as to what the differences in acquaintance may amount to; nevertheless there must be such a difference, because it is not possible to reduce objects of one kind to another.

If it is by acquaintance that we learn the meanings of the terms which stand for these different kinds of objects, then this direct confrontation yields a knowledge of meanings in 'isolation' and so independently of each other. Also constituents have the characteristic of simplicity; they may be conceived as 'bare' - Russell even talks of 'bare predicates' and 'bare relations' (MS,165,178). So they cannot determine 'from within' or internally from their nature (for they have no nature - MS, 174 ff.-) the combinations into which they may enter. Russell believes that knowledge of form is such a determination (MS,205). Although constituents and forms are independent of each other, yet they are also meant to fit each other. This idea of independence between forms and constituents prevails in Our Knowledge of the External World and later writings, as we shall presently see.

6. A proposition such as 'A and B are similar' has as its components A, B, similarity and the form of the dual complex. All these components are brought into relation in the proposition. The form is characterised as a completely general complex with no constituents, and so a logical object. We may ask, is not this object after all a 'thing' or entity among other constituents of the proposition? Russell says:

"the pure form of the proposition... is not a 'thing', not another constituent along with the objects that were previously related in that form" (MS,183).

Russell has a good reason for maintaining this. If the form were a constituent then

"there would have to be a new way in which it and...the other constituents are put together, and if we take this again as a constituent, we find ourselves embarked on an endless regress" (Ibid.).

Forms have no constituents and therefore are simple. That is to say, they do not admit of further analysis (MS,212) and that is why they are indefinable. Although the form of the dual complex 'xRy' appears to have a structure, it does not have one. It is to be conceived of as being structure itself (Ibid.).

This is a most surprising comment, but one that indicates to what extent structure or form for Russell is independent of constituents. It also makes clear that the actual configuration of constituents is 'objectified' by Russell so as not to require a distinction between form and structure. Naturally, as was said earlier, it is the constituents of propositions, being simple - with no essences - which require a structure that is independent of them and which makes them into a unity. What holds for the forms of atomic complexes can be extended to all other logical objects:

"besides the forms of atomic complexes, there are many other logical objects which are involved in the formation of non-atomic complexes" (MS,186;cf.Intr.p.13).

7. The question concerning 'the understanding of form' which Russell has said is crucial to the self-evidence of logical truth, must now be considered. There is a distinction between acquaintance and understanding. The former is a dual relation between subject and object which guarantees the existence of the object and in which the dualism of

truth and falsehood cannot occur (MS,199). An object of acquaintance simply is. Understanding, on the other hand, since it is a relation that involves various objects being combined in a proposition, allows for the duality of truth and falsehood.

"Understanding is the most comprehensive and fundamental of propositional cognitive relations,"(MS,204)

for it is only if we understand a proposition that we can have other propositional attitudes towards it, i.e., judging, believing, disbelieving, doubting, etc.. In what consists, then, the relation of 'understanding a proposition' ? Russell deals with this question in connection with the atomic proposition. (We may recall that he never wrote the part of the book which was to have dealt with molecular thought). The multi-object theory of judgement put forward in his article of 1911 and in The Problems is now complemented by the inclusion of 'form' as a further element of understanding (or judging) a proposition, which accounts for its truth or falsehood. When a subject S understands the proposition 'A and B are similar' 'understanding' is the relating relation; A, B and similarity are the constituents; and 'xRy' stands for the form of the dual complex 'something has some relation to something'. Hence the relation understanding brings into relation five components S, A, B, similarity and xRy. The subject must be previously acquainted with four components of the proposition.

If the obtaining of the relation of understanding any proposition presupposes acquaintance with the form of the dual complex, what does this acquaintance consist in ? It consists in "understanding what is meant by something having some relation to something". Is acquaintance in this sense then equivalent to understanding, and why ? Russell considers that forms, which are 'logical objects', are expressed in 'logical propositions' (containing no constituents) which must have

corresponding 'facts' making such propositions true (MS,245). Since 'something has some relation to something' is both indefinable and simple as well as a proposition, the dual complex for which it stands is both an object and a fact and therefore acquaintance and understanding have to be identified in this particular case:

"I do not think there is any difference between understanding and acquaintance in the case 'something has some relation to something'. I base this view simply on the fact that I am unable introspectively to discover any difference. In regard to most propositions - i.e., to all such as contain any constants - it is easy to prove that understanding is different from acquaintance with the corresponding fact (if any): Understanding is neutral as regards truth and falsehood, whereas acquaintance with the fact is only possible when there is such fact, i.e., in the case of truth; and understanding of any proposition other than the pure form cannot be, like acquaintance, a two-term relation. But both these proofs fail in the case of pure form, and we are therefore compelled to rely on direct inspection, which, so far as I can discover, reveals no distinction, in this case, between understanding and acquaintance".(MS,246).

Acquaintance with logical objects, then, guarantees their existence, so that as facts their corresponding logical propositions must be true with no possibility of error:

"For since understanding is here a direct relation of the subject to a single object, the possibility of untruth does not arise, as it does when understanding is a multiple relation"(MS,250).

8. There is an important consequence which Russell naturally derives from these views:

"The understanding of a pure form is, according to our theory, a logically simpler fact than the understanding of a proposition which is an instance of the form; it is moreover, part of what actually occurs when we understand an instance"(MS,250).

That is to say, understanding of form is a necessary presupposition of understanding any other proposition.(MS,248). But as understanding a form is the apprehension of a 'truth' by means of acquaintance then

the understanding of any proposition which is neutral to truth and falsehood (i.e., understanding of its meaning or of its sense in Wittgenstein's terms) presupposes a truth, a logical truth. In the case of the proposition expressing the logical truth itself, meaning and truth merge, for understanding its meaning is the guarantee that the form - an object - that corresponds to the proposition obtains and makes the proposition true. In this respect the form of the dual complex has a particular status above any other form or logical object we may apprehend. It is part of any kind of understanding we may have:

"... 'dual relation' itself, although it might seem to be one of a class whose other members would be 'triple relation' etc., is really, in a very important sense, unique, and not a member of any class containing any terms other than itself" (MS, 182).

"... different understandings have different logical forms. Understanding of 'something has some relation to something' is a dual complex; understanding of 'something has the relation R to something' is a treble complex; understanding of 'a has the relation R to b' is a quintuple complex. The distinctive thing that groups these understandings together is the fact that they all involve the pure form of dual complexes among their objects. For this reason, the simplest cognitive relation to a pure form belongs to propositional thought" (MS, 248).

For understanding any proposition (of whatever form) requires acquaintance with its form (which may, but need not be, a dual complex) -- and this acquaintance itself has the form of a dual complex.

9. There is something to be noted as regards perception and the truth of judgements. Russell now complements views involved in his earlier account which maintained that a judgement is self-evident when it is contemporaneous with acquaintance with the corresponding complex. This is now considered as a necessary but not sufficient condition guaranteeing self-evidence. For it is added:

"'truth' is defined as correspondence of a judgement with some complex; thus perception of the correspondence of a judgement with some complex is what constitutes perception of the truth of the judgement" (MS,321).

So Russell makes the correspondence as such, and not merely the fact itself, the object of perception. This kind of perception is what necessarily leads to self-evident truth, both in empirical and in logical knowledge. To justify the incorrigibility of truth in terms of perception is to do it in terms of how people come to know the truth. It is an account of a 'psychologistic' character, as Wittgenstein would claim. Nevertheless Russell appears to be satisfied with such an account because this kind of self-evidence is what, for him, constitutes the paradigm of knowledge (MS,323).

10. Russell's views in Epistemology concerning form and constituents considered above can be summarised in the following theses:

- T.1. In order to understand any proposition (a complex which expresses another complex, i.e. a fact) (MS,144), the subject has to be acquainted with its constituents. (MS, 188,189; see PP,p.32).
- T.2. Acquaintance with the constituents does not account for our understanding of the form of the proposition, i.e., the particular way the constituents are related. Hence acquaintance with form is also required, and this may be called 'logical experience' (MS,181,190).
- T.3. The form is an abstract entity, a 'logical object', and is known by a different kind of acquaintance from that of constituents. This reveals it as something ontologically distinct and independently known from them (MS,182,185,205,208,214,217).
- T.4. The form, although it is a logical object, is not a thing, not a further constituent in the proposition it may be a form of. If it were, a new form would be required to give a unity to those constituents, and so we would be led to a non-explanatory endless regress. (MS,183).

- T.5. 'Something has some relation to something' expresses the form for the dual atomic complex, which does not have constituents itself, and may be expressed in logical terms as 'xRy'. It is a general complex that, because it has no constituents, is a simple object of acquaintance, a 'pure form'. There are other 'pure forms', atomic and molecular; words like 'predicate', 'or', 'not', 'some', 'all' are concerned with them. (MS,181,182, 186,245).
- T.6. Acquaintance with the pure form is a precondition for the understanding of any proposition. Hence, the possibility of empirical knowledge depends on 'logical experience'. (MS,244,250-1).
- T.7. The pure form is also a fact and hence complex. It is expressed by a logical proposition: 'something has some relation to something', which is known to be true in the act of acquaintance and which in this case must be equivalent to understanding, i.e., to propositional knowledge (MS,186,212, 244-247).
- T.8. The subject's acquaintance with the pure form of a proposition itself takes the form of a dual complex which ensures the logically necessary truth of the proposition which expresses it as self-evident. For there is no possibility of error in what is given in acquaintance and perceived to be so given (MS,250, 319,321).

There is no doubt that these are paradoxical claims. Logical forms are to be conceived as simple, objects of acquaintance, unanalysable, and yet complex, i.e., as facts expressed in propositions, true and known to be so in acquaintance. Forms are not constituents of propositions, yet they are objects that must be brought into relation with the other objects in the understanding of propositions. Forms are simple, yet their function is to match a complexity of constituents in the proposition. Forms are necessary truths, yet their necessity derives from some form of experience, from the way they come to be known. Understanding differs from acquaintance in that it allows for the possibility of the truth-falsity duality, yet it is one with acquaintance in the case of understanding forms and so it results in self-evident truth, where duality of truth and falsity is not allowed for. The atomic dual complex is made a logically necessary truth in acquaintance, yet why it is necessarily the

way it is, is not accounted for.

All this has at least the following consequences for the nature of logic. Logical knowledge is knowledge of logical objects, and it is not derived from knowledge of contingent propositions, but is presupposed by them and makes them possible. As logic deals with logical forms, and these are 'objects', logic is concerned, like any other science, with a particular set of objects, and with what may be the case about them. These objects 'match' the constituents of propositions, but we are nowhere told why this matching is possible. The world of logic and the world of things are just made to fit each other. And for that matter logic can exist without a world. This is a view which Wittgenstein later criticises (TLP, 5.5521).

11. There is a connected general question concerning the relation of the proposition with the facts of reality which derives from Russell's views about the independence of form from constituents. If acquaintance with logical form is a presupposition of our understanding of an ordinary proposition, what guarantees and explains then that the fact to which the proposition may correspond has also form or structure similar to that of the proposition? From where does the fact get its form? If it is there in reality, what makes it fit or correspond to the logical form of the proposition? If the one-one correspondence holds between proposition and fact, as Russell thinks it must (MS, 144), their forms must be the same yet independent of each other, for they are two different complexes. What accounts for such an independence? If the logical form is a logical fact, is the ontological form of facts another ontological fact? If there is no such independent form in facts, then the world is the totality of things 'in isolation', independent of each other, which the logical form brings into combination in the words that

stand for them as constituents of propositions. Does logic then 'impose' its form onto the world in a somewhat Kantian fashion? That could not be so, for the one-one 'correspondence' requiring independence between language and the world would be difficult to account for. Nevertheless, as Russell so often repeats, knowledge of constituents by themselves does not provide knowledge of forms (the independence thesis). So, is the logical form of propositions one and the same as the form of facts? What guarantees this? It appears that there is no way out of the tension between: (i) what isomorphism requires, i.e., similarity of independent structure corresponding to each other and (ii) the fact that constituents by themselves do not provide structure. There appears to be only one form of structure that is a logical object known in acquaintance. Does the world then owe its structure to logic?

12. Russell does not deal with this question explicitly. He takes for granted the differences between, and independence of, the a priori world of logic and the empirical world of things, and the fact that they fit each other. What matters to him as an overall project is to establish what kinds of things there are in these two worlds that must be known in acquaintance, because they will serve as the basis for the kinds of truths which will be known as self-evidently necessary:

"The undefined terms are understood by means of acquaintance. The unproved propositions must be known by means of self-evidence" (MS, 305).

These propositions are the 'beginnings' on which all proof depends:

"We want self-evident beliefs to be the foundations of Knowledge" (MS, 304).

II. Wittgenstein's Criticism

13. The attempt to account for the meaning of indefinables in terms of acquaintance was a goal that Russell had assigned to philosophical logic in The Principles of Mathematics:

"The discussion of indefinables - which forms the chief part of philosophical logic - is the endeavour to see clearly, and to make others see clearly, the entities concerned, in order that the mind may have the kind of acquaintance with them which it has with redness or the taste of pineapple. Where, as in the present case, the indefinables are obtained primarily as the necessary residue in a process of analysis, it is often easier to know that there must be such entities than actually to perceive them" (p.xv) (my emphasis).

In Epistemology Russell thought that the perception of such indefinables had been established, and with them the truth of logical propositions by means of self-evidence. Wittgenstein disagreed with this conclusion.

14. This question of indefinables is one of the first problems that Wittgenstein takes over from Russell, and he shares with him the view that the indefinables of the proposition are constituents and form, (LR,p.19-20). But does Wittgenstein at this stage also share Russell's views about the independence of form and constituents? The answer has to be given in the affirmative in so far as Wittgenstein considers that the

"Indefinables are of two sorts, names and forms" (NL,p.98), and then further claims that

"the indefinables of logic must be independent of each other" (Ibid.p.104).

But there is a difference from Russell's account of independence. Wittgenstein's 'forms' do not belong in a world of 'abstract entities' known by logical intuition, i.e., an a priori world of Platonic forms.

So they are not known by logical acquaintance and their existence is not a matter of self-evidence. The Notebooks opens with these questions:

"Then can we ask ourselves: Does the subject predicate form exist? Does the relational form exist? Do any of the forms exist at all that Russell and I were always talking about? (Russell would say: 'Yes. That's self-evident'. Well !)" (3.9.14).

A few lines later, when Wittgenstein is trying to elucidate how to settle the question as to whether 'A is good' and 'A is brighter than B' are of different forms, he adds:

"What sort of evidence can satisfy me?...Is the only evidence here once more that extremely dubious 'self-evidence'?" (Ibid.).

In the Tractatus, Wittgenstein has already found convincing reasons that make the Russellian self-evidence totally dispensable in logic, simply because language itself prevents every logical mistake. "What makes logic a priori is the impossibility of illogical thought" (5.4731). The impossibility derives from the nature of the symbolism, once names are given meaning and propositions sense. Wittgenstein brings the a priori from the realm of the Platonic world of logical objects and logical experience to the linguistic level of a correct symbolism which would prevent nonsensical combinations of symbols. The truth of logical propositions will be established "from the symbol alone". Thus, the Russellian a priori, making logic a study of particular sets of objects, will be turned in Wittgenstein's hands, into a study of the necessary logical features of language, of symbolism:

"Here, as so often happens, the a priori turns out to be something purely logical" (NB, 29.3.15).

How did Wittgenstein arrive at the impossibility of illogical thinking which could dispense with the Russellian a priori and its allied psychologistic view of self-evidence? How could he account for the

meaning of the indefinables, 'constituents and forms', and what did he make of their independence? Let us first trace the steps which led Wittgenstein to question the Russellian doctrines.

15. Wittgenstein's earliest recorded criticism of Russell's Epistemology dates from June 1913, when the project to write 'Notes on Logic' was probably not yet in sight. The criticism occurs in a letter from Wittgenstein to Russell and runs:

"I can now express my objection to your theory of judgement exactly: I believe it is obvious that from the proposition 'A judges that (say) a is in the Relation R to b' if correctly analysed, the proposition ' $aRb.v.\sim aRb$ ' must follow directly without the use of any other premiss. This condition is not fulfilled by your theory" (LR, p.23).

We now know what premisses would be involved in understanding ' $aRb.v.\sim aRb$ ':

(i) acquaintance with the constituents a, b, and R, (ii) acquaintance with the pure forms of the dual complex 'something has some relation to something' (with the knowledge of the truth of that proposition that acquaintance with it involves), (iii) the understanding relation which brings into combination the four components a, b, R and form of the dual complex, (iv) acquaintance with the forms with which 'or' and 'not' (the two indefinables of Principia Mathematica) must be concerned. Russell could not directly derive ' $aRb.v.\sim aRb$ ' from ' aRb ' without having to bring in premiss (iv), i.e., further logical objects or forms which the relation of judging would have to take into consideration. But it is obvious, as Wittgenstein says, that since direct derivation is possible, the other premisses are unnecessary. The 'obviousness' lies in this. If A judges that aRb , then aRb must be a possible state of affairs, and this means that either aRb obtains or $\sim aRb$ obtains.

This same thought occurs in the Notebooks on 10.11.14:

"When I say 'p' is possible', does that mean that 'p' makes sense' ?... does it not rather try to say what 'pv[~]p' shows ?"

What Wittgenstein denies here is the non-derivability of the indefinables 'or' and 'not' that Russell had stated, and so affirms that from the sense of the atomic proposition everything would follow. He had already said so in the summer of 1912 when he wrote to Russell:

"I believe that our problems can be traced down to the atomic proposition. This you will see if you try to explain precisely in what way the Copula in such a proposition has meaning. I cannot explain it and I think that as soon as an exact answer to this question is given the problems of 'v' and of the apparent variable will be brought very near their solution if not solved. I therefore now think about 'Socrates is human' (Good old Socrates!)" (LR,p.16).

16. There are no logical objects. In 'Notes on Logic' Wittgenstein takes the first steps to 'derive' from the atomic propositions the 'pure forms' and all the other logical constants such as 'or', 'not', 'some', 'all', etc., by denying them the status of 'logical objects'. The constants 'or' and 'not' cannot be indefinable for they are interdefinable (NL,p.101,104). Also,

"The false assumption that propositions are names leads us to believe there must be 'logical objects': for the meaning of logical propositions would have to be such things" (NL,p.93).

The criticism is directed against Frege and Russell. But clearly Wittgenstein is directly challenging the Russellian view that because 'logical propositions', do not have constituents they must be simple objects that can be denoted and so named. The term 'relation' had been such a name, for Russell, since it stood for the form of the dual complex, but:

"There is no thing which is the form of a proposition, and no name which is the name of a form. Accordingly we can also not say that a relation which in certain cases holds between things holds sometimes between forms and things. This goes against Russell's theory of judgement" (NL,p.99).

Russell's theory brings together things (i.e., constituents of propositions) with 'pure form' as distinct components to be arranged in the act of understanding or judging. This is now denied, for a form is not a thing. 'Relation' does not indicate a thing or denote particular relations as constituents of propositions do not denote either, for 'R' does not symbolise. 'R' in 'aRb' appears to stand for an object but we are misguided by the way the term symbolises (NDM,p.109). He says in 'Notes on Logic':

"In 'aRb' 'R' looks like a substantive but it is not one. What symbolises in 'aRb' is that 'R' occurs between 'a' and 'b'. Hence 'R' is not the indefinable in 'aRb'... This is the first thing that indicates that there may not be logical constants"(NL,p.99).

Russell in his Epistemology considered predicates and relations as constituents of propositions independently of the 'forms', i.e., the general form of predication or the general relational form. Wittgenstein rejects the idea that predicates and relations are 'indefinable constituents':

"Logical indefinables cannot be predicates or relations, because propositions owing to sense cannot have predicates or relations"(NL,p.101).

In a letter to Russell prior to 'Notes on Logic' he had said that predicates and relations were all copulae (forms) and so only names were ultimate constituents. This idea was also to undermine Russell's theory of types which, consistently with his earlier views, Wittgenstein in the Tractatus came to show was superfluous. He says in the 1912 letter:

"all theory of types must be done away with by a theory of symbolism showing that what seem to be different kinds of things are symbolised by different kinds of symbols which cannot possibly be substituted in one another's places"(LR,p.19-20).

17. Thus, the indefinables Wittgenstein is left with, are constituents

and forms, (general form of predication and that of the dual relation) i.e., 'xRy' and ' ϕ x' (NL,p.98). These forms are considered by Wittgenstein to be functions. Hence names and functions are the indefinables. Understanding these, we understand the proposition's sense. As regards names, Wittgenstein agrees with Russell that their meaning is the thing they stand for. But as regards forms, if their meaning is not an object how is it to be accounted for? We know that the name symbolises by standing for a thing, but how does the form symbolise? Wittgenstein appears to answer that it symbolises by 'doing' something in its correlation to the facts:

"The form of the proposition symbolises in the following way: Let us consider symbols of the form 'xRy' to which correspond primarily pairs of objects of which one has the name 'x' the other the name 'y'. The x's and y's stand in various relations to each other, and among other relations the relation R holds between some but not between others. I now determine the sense 'xRy' by laying down the rule: when the facts behave in regard to 'xRy' so that the meaning of 'x' stands in the relation R to the meaning of 'y' then I say that these facts are 'of like sense' (gleichsinning) with the proposition 'xRy'; otherwise 'of opposite sense' (entgegengesetzt). I correlate the facts to the symbol 'xRy' by thus dividing them into those of like sense and those of opposite sense. To this correlation corresponds the correlation of name and meaning. Both are psychological". (NL,p.99) (1)

The general indefinable 'xRy' gets its meaning, like a name, through its correlation with something in the world, i.e., facts. These facts are of two kinds: those which contain the pairs of particulars standing in a determinate relation, and those which do not stand in such a relation. The function is correlated with the group that stands in the particular relation, and also with the group whose pairs do not stand in that particular relation. Thus, the first pair will be 'of like sense' with 'xRy', and so it will say that those facts have that relation, and the second pair will be of opposite sense and say that those pairs do not.

Thus, once the names and form have been given meaning we know that the proposition 'aRb' has a sense, i.e., says that certain things are so, and also not so. Thus, functions have meaning by 'doing something', viz. by discriminating between two groups of facts, and this permits the proposition to say something. This is what it is for a proposition to be bipolar or have a sense. So, by giving meaning to forms and constituents, we give propositions sense. We do not require the Platonic world of objects to account for the meaning of forms.

The bipolarity of the proposition is precisely the doctrine of how propositions get their sense, which is by discriminating between the two kinds of facts. These are its two directions or two poles. And this doctrine is precisely what is involved in Wittgenstein's criticism of Russell's theory of judgement. For in accounting for the sense of the atomic proposition, the proposition 'aRb \vee \sim aRb' follows without the need of other premisses. Wittgenstein says

"A judges (that) p' consists of the proper name A, the proposition p with its two poles, and A's being related to these two poles in a certain way. This is obviously not a relation in the ordinary way" (NL, p.96; cf. p.97).

By understanding p, which occurs in the judgement as a proposition - not simply by understanding "constituents, or its constituents and form but not in the proper order" (Ibid.) - the subject knows that either the fact that p or the fact that not p corresponds to 'p' (this, we may assume, is the relation of A to the two poles). Therefore A knows in understanding 'p' that 'p \vee \sim p'. It becomes clear that not only is the pure form 'xRy' not a thing, but neither are ' \vee ' and ' \sim '. This is the foundation of Wittgenstein's fundamental doctrine that nothing is introduced by the logical constants that is not already present in the atomic proposition. In the light of the eight theses of Russell's

Epistemology (see above pp.75-76) what Wittgenstein is denying may be summarised as follows, beginning with Thesis 3:

- T.3. 'forms' are not abstract entities; there are no logical objects.
- T.4. Hence 'form' cannot be confused with another constituent in the proposition or treated as another object in the understanding or judging relation.
- T.5. A form considered as a logical proposition has no constituents, but this does not make it simple; "propositions are always complex, even if they contain no names" (NL, p.103).
- T.6. Acquaintance with form as an object cannot be a precondition for the understanding of any other proposition for there is no such object. Hence understanding of propositions cannot depend on 'logical experience' and on an a priori logical world. Rather, logic depends on the understanding of the ordinary propositions because its names and forms mean in their-relation to things and facts of this world.
- T.7. A form such as 'something has some relation to something', regarded as simple and complex, object and fact, name and proposition, is an impossible combination; propositions cannot be names, for names cannot be true or false.
- T.8. Logical necessity and logical truth cannot have their bases in acquaintance, in how people come to know the truth, i.e., in 'dubious self-evidence'.

Theses 1 and 2 are not denied, since Wittgenstein maintains with Russell that names and forms are the indefinables that must be understood if the proposition is to be understood. Russell's 'understanding' means acquaintance. In Wittgenstein's view the question how names and forms actually get their meaning by correlations with things and facts should be disregarded, for such correlations "are psychological" (NL, p.99) and so, of no interest to logic. But it is important to see that in 'Notes on Logic' forms are given meanings in a direct correlation to the facts. On the basis of the consequences that follow from this relation of forms to the facts, Wittgenstein will be led in the Tractatus to abandon this view.

18. In claiming that both names and forms are indefinables, Wittgenstein is committed to certain consequences which indefinability brings. Indefinables must be (i) simple or not further analysable, and (ii) independent of each other. How do these two characteristics apply to names and forms? Names are particular indefinables. This is simply stated, as if non-problematic. Forms are general indefinables (the general predicate form and relational form) which are "unavoidable if propositions are not all indefinable" (NL, p.98). If "every proposition is a new symbol", as is in fact the case, - in so far as a new sense is conveyed by constituents already known - then there must be "indefinable ways of combination"; for otherwise each proposition would have to be a new unique combination and thus be introduced as an indefinable. This is obviously not the case. As regards the 'simplicity' of names, it is easy to see that they are not further analysable for they have no further denoting symbols as their constituents. But can simplicity be equally attributed to forms? Wittgenstein's answer appears to be in the affirmative. He first formulates it in a letter to Russell of January 1913 (which may well have influenced Russell's views in Epistemology) (LR, p.20). It says:

"Propositions which I formerly wrote $\epsilon_2 (a, R, b)$ I now write $R(a, b)$ and analyse them into a , b , and $\underbrace{(\exists x, y) R(x, y)}_{\text{not complex}}$ ".

So it appears that forms are not complex-not further analysable- because the signs 'R' or ' ϕ ' (for the predicate form) do not symbolise by themselves, i.e., do not stand for anything. How is this to be reconciled with Wittgenstein's explicit claim

"propositions are always complex even if they contain no names?" (NL, p.103).

In 'Notes on Logic' there seems to be a persistent ambiguity as regards

the notion of form. For form appears to be considered both as (i) an indefinable, a function, simple, and (ii) a propositional variable or propositional form, and complex. That is to say, there is an ambiguity between the simplicity and complexity of forms, which will lead him ultimately to establish only constituents as the indefinable simples.

19. Indefinability also requires the independence of indefinables (NL,p.104). In what way are the meanings of names and forms independent? Names mean by standing for their objects and this meaning can be given independently of the form. The meaning of the form, or the manner in which the form symbolises, presupposes names, or things denoted by names. Forms acquire their meaning, i.e., symbolise, by being correlated with the facts in order to differentiate them into two kinds. These facts must contain objects for which the names stand. Forms are concerned with arrangements and therefore depend on names to determine those correct arrangements. They are thus not independent of names in respect of their meanings. Names on the other hand, appear to have meaning by themselves. Wittgenstein says:

"Logical functions all presuppose one another. Just as we can see $\forall p$ has no sense if p has none, so we can also say p has none if $\forall p$ has none. The case is quite different with ϕa , and a ; since here a has a meaning independently of ϕa , though ϕa presupposes it". (NDM,p.117; cf.p.115).

This view is similar to Russell's conceptions of independence between forms and constituents in so far as names can mean in 'isolation' i.e., "a has a meaning independently of ϕa ". (Although it is likely that there Wittgenstein is influenced by Frege's view of functions)⁽²⁾. But whether the influence here is Russellian or Fregean the consequence appears to be one and the same, namely, the presupposition of a true proposition concerning a . That is if 'a' has a meaning independently

of and prior to ' ϕa ' having a meaning then this must amount to saying that 'a' has a meaning when the object it stands for is given a name or is correlated to this name by an act of ostension. This correlation would have to be expressed in or would involve a true proposition⁽³⁾.

In 'Notes on Logic' and 'Notes to Moore' Wittgenstein does not yet seem to see the consequence which this view of functions involves, namely, that of having certain true propositions at the basis of language. Also, it is clear that this conception of functions does not permit them to be considered as 'independent', which is a property that all indefinables must enjoy. Nevertheless Wittgenstein at this stage already has a fundamental premiss - the bipolarity of the proposition - that will lead him into a new position.

20. We shall now consider in more detail the significance that this doctrine of bipolarity has for our present purposes. For it is upon this doctrine that the "Grungedanke" of the Tractatus rests (4.0312)⁽⁴⁾, - the purpose of that "Grungedanke" lies in showing that it is upon contingent sense that logic depends, and yet upon a sense that is independent of truth-value, i.e., independent of the facts.

Wittgenstein's earliest version of the doctrine of bipolarity is formulated in 'Notes on Logic', in these terms:

"But we must be able to understand a proposition without knowing if it is true or false. What we know when we understand a proposition is this: we know what is the case if it is true, and what is the case if it is false. But we do not necessarily know whether it is actually true or false. Every proposition is essentially true-false. Thus a proposition has two poles (corresponding to case of its truth and case of its falsity). We call this the sense of a proposition. The meaning of a proposition is the fact which actually corresponds to it. The chief characteristic of my theory is: p has the same meaning as not-p...Neither the sense nor the meaning of a proposition is a thing...It is clear that we understand propositions without knowing whether they are true or false". (NL, p.93-94).

Between 'Notes on Logic' and the Tractatus, Wittgenstein's theory of the sense and the meaning of the proposition altered. In the Tractatus only names have meaning and only propositions sense. But the thesis that one can understand a proposition without knowing whether it is true (TLP,4.024) is central to the Tractarian doctrines. The picture theory of the proposition is devised to account for it and so to present an alternative to Russell's unsuccessful account of the problem in Epistemology. Our common-sense intuition that we understand a proposition independently of our actually knowing whether it is true or false, is something with which any theory of meaning must be concerned and for which it must ultimately answer. It has to account for the interconnections between sense and truth and their relation to reality. This is what Wittgenstein's entire philosophical concern revolves around and it is first formulated in his bipolarity doctrine of which A. Kenny has said:

"The thesis of bipolarity is constantly reaffirmed through Wittgenstein's life: in conversations with Waismann (WWK,67, 88,97,) in the Philosophische Grammatik (129), in the Blue Book (p.54), in the Philosophical Investigations (I,251). It is tantamount to the insistence that what gives a proposition its sense must be independent of what gives it its truth, which is also a notion which recurs from the early Notebooks (107) through Bemerkungen (BP,78) into the argument against private languages in the Investigations" (1974,p.12).

It is clear that the thesis is a fundamental tenet of 'Notes on Logic', which underlies Wittgenstein's idea concerning the independence of sense from truth-value.

21. As regards the independence of a proposition's sense from its truth-value there is an important distinction to be drawn between the claims:

- (i) the sense of a proposition, say 'p', is independent of its own truth and falsity;

and

(ii) the sense of a proposition 'p' is independent of the truth and falsity of any other proposition.

Wittgenstein not only held (i) -on this there is agreement among commentators- but also (ii), though on this there is no such agreement. Let us call (ii) the sense-truth independence thesis or, the sense-priority thesis. By 'priority' here is meant the independence of sense from truth, that is to say, the priority required by the fact that we understand a proposition independently of, or prior to, knowing whether it is true or false. It is not a 'chronological' priority. This thesis may be expressed as the doctrine 'sense does not presuppose truth'. The contention here is that Wittgenstein held this doctrine not only in his earlier writings, but, most important of all, in the Tractatus where the picture theory was devised to account for it, and that it is a doctrine which runs as a continuous thread through Wittgenstein's whole philosophy, giving it a unity and a continuity traceable even to his remarks On Certainty. That Wittgenstein held such views in the Tractatus is explicitly denied in interpretations such as that of Miss Ishiguro in her paper 'Use and Reference of Names' (1969). Other interpretations, as for example the one propounded by R. White in 'The Tractatus and the Sense of Propositions' have been taken to mean that the doctrine 'sense does not presuppose truth', though at the heart of the Tractatus, is no longer maintained in the Philosophical Investigations. These views shall be discussed later.

22. If 'every proposition is essentially true-false' and if in this lies its capacity to have a sense, then every proposition is contingent. This is what 'Notes on Logic' states. It may be recalled that these were also Russell's views in his Epistemology. But Russell did not succeed in accounting for the doctrine of contingent sense without

assuming truth as its foundation, namely the necessary truth of a logical proposition, the truth about its form. He would also have had to rely on the truth of a proposition about the existence of its constituents but with this question he did not then deal. As we have seen, Wittgenstein had good reasons for abolishing such a foundation of logical truth and for holding the view that contingent sense does not depend on or presuppose any truth. In the Notebooks on 21.10.14 he says:

"I thought that the possibility of the truth of the proposition ϕa was tied up with the fact $(\exists x, \phi). \phi x$. But it is impossible to see why ϕa should only be possible if there is another proposition of the same form. ϕa surely does not need any precedent. (For suppose that there existed only the two elementary propositions ' ϕa ' and ' ψa ' and that ' ϕa ' were false why should this proposition only make sense if ' ψa ' is true ?)"

This early belief may be traced back to the letter he wrote Russell in January 1913, (see above p.87). But when Wittgenstein some time later tried Russell's views as expressed in Epistemology, he realised they "wouldn't work", and so rejected his own earlier opinions (Clark, 1975, p.252). In the above passage of the Notebooks Wittgenstein goes a step forward from his first rejection of Russell's views, for he now not only holds that the sense of a proposition does not depend on a logical truth but also that it does not depend on the truth of any other proposition. The elementary proposition's sense must be accounted for without any precedent of truth. Propositional sense cannot depend on propositional truth. Sense does not presuppose truth. This doctrine involves the claim that at the basis of language (at the basis of the account for the conditions of sense) there is not a set of true propositions on which the sense and truth of other propositions depend. The foundations of language, i.e., of sense, do not lie on true propositions. This not only denies Russell's doctrine

on form, but also the motivation and spirit which led him to that doctrine, namely, the quest for

"unproved propositions [which] must be known by means of self-evidence" (MS, 305).

23. The sense-truth independence doctrine is underlain by the perennial problem of the sense of a false proposition, which so much bothered Russell and Wittgenstein. For as it has recently been put: "The problem of language is the problem of the false proposition".⁽⁵⁾ Wittgenstein presents the problem in the Notebooks as follows:

"Even in a picture we could represent a negative fact by representing what is not the case. If, however, we admit this method of representation, then what is really characteristic of the relation of representing?" (30.10.14).

At this stage, Wittgenstein has already introduced his notion of 'picture' and 'picturing' as a possible way of accounting for contingent sense. It is clear that here, representing means precisely the capacity that the proposition must have in order to be either-true-or-false. For representing must include 'representing what is not the case'. To represent then is to have a sense capable of agreeing or disagreeing with the facts. This is what must be explained:

"all we want is to investigate the principles of representing as such" (NB, 1.11.14).

This 'representing as such' (having as its centre 'the representing relation') is to be accounted for, not by involving a Russellian Platonic world, but by giving both names and forms meaning, in direct correlation to the facts. This is Wittgenstein's position in 'Notes on Logic'. But a question arises: Have we not then to presuppose truths about those facts and their constituents? Has not sense after all to depend on those facts? The premiss that sense does not presuppose truth, is already firmly established in 'Notes on Logic' but the implications as

to what it means to represent independently of truth and falsity (i.e., independently of the actual obtaining of facts, while having a correlation to them in reality) are not. In 'Notes Dictated to G.E. Moore' and in the Notebooks Wittgenstein will have to wrestle with the implications which his premiss on sense-priority will disclose. For the moment we postpone this discussion to look into the impact that the doctrines of 'Notes on Logic' had on Russell himself.

III. The Impact of 'Notes on Logic'

24. The criticisms of Epistemology appear to have been assimilated to some degree by Russell. This becomes manifest particularly in his Our Knowledge of the External World (1914), 'The Philosophy of Logical Atomism' (1918), and Introduction to Mathematical Philosophy (1919). We shall now consider how far Russell's views on constituents and his account of form altered after 1913 as a consequence of Wittgenstein's criticisms. There is something in Russell's philosophy which does not alter, namely, his Platonistic two-world theory of knowledge and of 'entities', allied to his strict denotational theory of meaning. This determines to a great extent Russell's views on form in the period 1914-1919, in particular his non-abandonment of the thesis of independence between form and constituents and its consequences, which Wittgenstein continued to criticise in the Notebooks and Tractatus. Russell's own opinion of Wittgenstein's impact and in particular that of 'Notes on Logic' is expressed thus:

"Wittgenstein's doctrines influenced me profoundly... (his) impact upon me came in two waves: the first of these was before the First World War; the second was immediately after the War when he sent me the manuscript of his Tractatus...At the beginning of 1914 Wittgenstein gave me a short typescript consisting of notes on various logical points. This, together with a large number of conversations, affected my thinking during the war years while he was in the Austrian army and I was, therefore, cut off from all contact with him" (MPD,p.83).

25. In the preface to Our Knowledge of the External World Russell

says:

"In pure logic, which, however, will be very briefly discussed in these lectures, I have had the benefit of vitally important discoveries, not yet published, by my friend Mr. Ludwig Wittgenstein" (p.8-9).

There is a characteristic passage where Russell may be taken to be following Wittgenstein in which views on form and constituents are expressed in a manner reminiscent of Epistemology:

"In every proposition and in every inference there is, besides the particular subject-matter concerned, a certain form, a way in which the constituents of the proposition or inference are put together. If I say, 'Socrates is mortal', 'Jones is angry', 'The sun is hot', there is something common in these three cases, something indicated by the word 'is'. What is common is the form of the proposition, not an actual constituent...Take (say) the series of propositions 'Socrates drank the Hemlock', 'Coleridge drank opium', 'Coleridge ate opium'. The form remains unchanged throughout this series, but all the constituents are altered. Thus form is not another constituent, but is the way the constituents are put together. It is forms, in this sense, that are the proper object of philosophical logic" (OKEW,p.52;cf.MS,183).

J. Griffin, in Wittgenstein's Logical Atomism, discusses this passage in connection with the contrast between Russell's and Wittgenstein's views on constituents and form. He says that this passage

"clearly enough shows the difference; Russell takes ' ϕx ' and ' xRy ' as constituents which, when they appear in a proposition, are given a form; Wittgenstein, as I have said, takes them not as ingredients which have a form but as the form" (p.15).

When this was written Russell's Manuscript had not yet come to light, but it confirms Griffin's views, although with the following modification. It does not seem to be the case that for Russell ' ϕx ' and ' xRy ' are constituents, for they express "the way constituents are put together" and so they are forms. Hence, the difference here between Wittgenstein and Russell seems to lie in two facts: (i) Russell still thinks of ' ϕ ' and ' R ' as symbolising respectively a quality and a relation, i.e., they symbolise constituents of propositions as much as ' x ' and ' y ' do:

"When it [a fact, proposition] consists of a relation between two things it has three constituents, the things and the relation" (OKEW, p.61);

(ii) since Russell claims that knowledge of constituents themselves does not provide knowledge of form, this latter knowledge must be independent of the former. He explicitly contends that we may

"understand all the separate words of a sentence without understanding the sentence...In such a case we have knowledge of the constituents, but not of the form. We may also have knowledge of the form without having knowledge of the constituents" (OKEW, p.52-53).

Thus in holding the view about the independence of form from constituents - as he held it in Epistemology too - he must treat form as standing for some thing. This thing is not an 'object' in the sense that 'John' or 'Peter' are objects, nor even in that sense in which drinking or mortality are objects, Russell says. Nevertheless its meaning must 'indicate' not a constituent but some kind of 'entity'. Clearly, if Russell thought that he was following Wittgenstein in this account, he was in fact only misrepresenting him. This is also confirmed by what follows.

26. Further, at the end of Lecture VII on 'The Theory of Positive Infinity' in Our Knowledge of the External World, Russell explicitly acknowledges in a footnote his indebtedness to Wittgenstein

in these terms: "In the above remarks, I am making use of unpublished work by my friend Ludwig Wittgenstein"(1914,p.208). The remarks in question are these:

"...propositions in which numbers verbally occur have not really any constituents corresponding to numbers, but only a certain logical form which is not part of propositions having this form. This in fact is the case with all the apparent objects of logic and mathematics. Such words as or, not, if, there is, identity, greater, plus, nothing, everything, function and so on, are not names of definite objects, like 'John' or 'Jones', but are words which require a context in order to have meaning. All of them are formal, that is to say, their occurrence indicates a certain form of proposition, not a certain constituent. 'Logical constants', in short, are not entities; the words expressing them are not names, and cannot significantly be made into logical subjects except when it is the words themselves, as opposed to their meanings, that are being discussed. This fact has a very important bearing on all logic and philosophy since it shows how they differ from the special sciences"(pp.212-213)

It looks as if, having accepted that "logical constants are not entities", a new account of form would have to be provided, for their occurrence indicates certain forms of proposition. That is to say, if in Epistemology the constants 'relation', 'or', 'not', etc., were concerned with pure forms so as to indicate them, i.e., stand for them, how are we to understand that their occurrence "indicates certain forms" now that these words are said not to 'denote forms' ? How are we to understand the nature of 'forms' as such ? Do they still pertain to the a priori and so remain independent of constituents, being 'external' to them ? Does logical truth cease to be founded on the apprehension of those forms and as a result cease to be self-evident ? What is the new account of logical truth ?

27. Logical forms are, from now on, never called 'logical objects' or entities by Russell, but nevertheless he cannot help treating them as

such. If the dual complex, or the form of a relational proposition, is not an entity, what is it that we need to be acquainted with in order to understand a proposition? Only constituents? At first sight this is what appears to be argued:

"in the first acquisition of knowledge concerning facts, logic is useless" (OKEW, p.63).

In Epistemology, the subject's judging that he was acquainted with a form of a proposition was a fact, expressed in the proposition 'something has a dual relation to something' and Russell considered that a self-evident logical truth (MS, 246-247, 250). This fact had to be known as a precondition for understanding any atomic empirical fact such as 'aRb'. Now Russell avoids the question of the relationship between the two, but he seems more emphatic than ever, in stating his deep conviction of independence. He says:

"In pure logic, no atomic fact is ever mentioned: we confine ourselves wholly to forms, without asking ourselves what objects can fill the forms" (OKEW, p.63).

The separation between the atomic facts and logic is total:

"Pure logic is independent of atomic facts...Pure logic and atomic facts are the two poles, the wholly a priori and the wholly empirical" (Ibid.).

The wholly a priori are the forms, "the inventory of forms" which philosophical logic is supposed to establish. The independence between form and constituents is here as in his Epistemology, and earlier writings, an expression of Russell's 'two-world' theory. Only propositions such as 'If anything has a certain property, and whatever has this property has a certain other property, then the thing in question has the other property' is a true logical proposition, and Russell adds:

"Since this general truth does not mention any particular thing, or even any particular quality or relation, it is wholly independent of the accidental facts of the existent world and can be known, theoretically, without any experience of particular things or their qualities and relations" (OKEW, p.67).

These are the kind of truths of logic, together with other truths of a general kind that are not based on empirical knowledge, but whose truth is purely a priori:

"in such propositions of pure logic we have the self-evident general propositions of which we are in search" (OKEW, p.66).

In his Epistemology Russell attempted to base logic on the existence of logical objects, and logical truth as self-evident on the basis of our acquaintance with them. Also, his conception of the a priori as the world of forms makes logic independent from this world. This view is also maintained here since the constituents of propositions do not determine form, i.e., the way they are arranged, and since syntax is independent of the semantics of the constituents that may fill the forms, logical truth is not based on our understanding of ordinary propositions, but on acquaintance with pure form. Nevertheless form and constituents fit. In this perspective logic can exist without a world, but how logic is able to fit the world, and how it applies to propositions about this world, Russell did not explain. Wittgenstein later criticised him for this in the Tractatus (5.55 ff).

28. By contrast, Wittgenstein in 'Notes on Logic' wants to base logic on the nature of the understanding of the ordinary proposition, without any commitments to the existence of any kind of entities and so of any truth about their apprehension. Logic must be based on the ordinary proposition which has the bipolarity truth-falsity independently of any particular truth or any particular existence. Yet, Wittgenstein does

want a logic related to the world, and moves in the direction of accounting for syntax in terms of the semantics of the constituents of propositions, thus making syntax dependent on semantics⁽⁶⁾. There seems to be no trace of these tendencies of Wittgenstein's in Russell's Our Knowledge of the External World. Rather his insistence of the independence of the a priori from the empirical seems to lead him further from Wittgenstein. Let us consider how this independence of form determines Russell's view of 'philosophical logic', which amounts to his view of the essential task of philosophy.

29. It is the task of philosophy, Russell claims, to discover and establish "the inventory of logical forms". The inventory so far 'discovered', e.g., the relational form, the forms brought to light in the analysis of descriptions, the form of belief, etc., has provided revolutionary philosophical insights. Now, Russell argues, it can even be stated that such an inventory "has rendered a truly scientific discussion of many philosophical problems possible" (OKEW, p.67). Why ?

In sciences like physics or mathematics there are hypotheses which may be regarded as the scientific 'forms' or structures which enable us to account for the facts (LA, p.340-41), in the sense that we apply them to reality and see how the facts fit into them. Structures organise the constituents. That is why Russell claims that "we know more about the form of nature than about its matter" (IMP, p.55). In so far as philosophical logic "provides an inventory of possibilities, a repertory of abstractly tenable hypotheses" (OSMP, p.85), it is scientific in outlook, in its method and so too in its results. If philosophical logic suggests hypotheses or forms, then it must be viewed as applied logic. For by providing hypotheses and testing them against reality, the structure of the

world, or how its constituents are related, will be revealed. Russell became aware of this 'scientific' power of logic in his early discovery of relational forms. Traditional philosophy maintained that only the subject-predicate form existed because it "decreed in advance that reality must have a certain special character" (OKEW,p.68). This belief, Russell repeatedly claims, has been the cause of "two millennia of important error"⁽⁷⁾. Philosophy by not decreeing in advance, but rather by suggesting new forms, can explain new facts, e.g., relational forms can explain serial order, space, time, etc.. The discovery of new forms has helped to solve old philosophical problems in a scientific way; The inventory of forms like an inventory of models is not prescribed by the world, nor does it determine in advance that the world must be of such and such a form. Such inventories are, literally, hypotheses⁽⁸⁾.

30. Russell's independence thesis is also maintained in his 'the Philosophy of Logical Atomism' (1918) and Introduction to Mathematical Theory (1919). In both these works he continues to hold the distinction between the empirical and the a priori along with his denoting theory of meaning. It is clear that Russell accepted from Wittgenstein the view that atomic forms, i.e., the atomic logical propositions must be complex. But this acceptance of complexity raises a new problem for Russell:

"What are the constituents of logical proposition ?"
(PLA,p.239).

As regards the analysis of logical form, Russell, in 'The Philosophy of Logical Atomism' follows the same lines pursued hitherto. By a process of abstraction which concentrates on what is constant in the arrangements of constituents of different propositions, we come to isolate the forms

by substituting variables for the constants of the propositions in question.

In this way we exhibit the form in symbolism. But then the question is how to account for this form in order to make it fully intelligible.

Russell argues along the following lines.

The proposition 'Socrates loves Plato' contains as constituents 'Socrates', 'loves' and 'Plato'. The form of this proposition can be exhibited by 'xRy' which is a scheme formed only by variables, but this scheme is of a general kind so that

"any proposition which expresses a dual relation can be derived from xRy by assigning the values to x and R and y. So that that is, as you might say, the pure form of all those propositions" (PLA, p.238).

("The pure form": too reminiscent of Epistemology !) The propositions of logic do not contain constituents as such, but variables; can we then state that all the propositions of logic are entirely devoid of constituents ? That cannot be, Russell concludes. This is an interesting conclusion. It seems to follow from Wittgenstein's opinion in 'Notes on Logic':

"propositions are always complex even if they contain no names" (p.103).

Russell had maintained in Epistemology that if 'forms' could be considered as the propositions of logic - and they had to be so considered for logical propositions do not contain constituents - then the primitive forms had to be introduced as indefinable objects and as unanalysable and so "could be treated as simple". Now if all logical propositions are complex the question arises as to what constitutes that complexity. For at bottom, Russell believes there is an

"impossibility of explaining complexity without assuming constituents" (OKEW, p.152).

In order to answer this question Russell returns to his old theory from Epistemology: logical form must be some kind of logical object. He now says, as he did before, that the pure form of a dual complex is not a

constituent of a proposition such as 'Socrates loves Plato' in which it occurs, but he adds,

"Nevertheless it may possibly be a constituent of general statements about propositions that have that form, so I think it is possible that logical propositions might be interpreted as being about forms"(PLA,p.239).

31. In Introduction to Mathematical Philosophy Russell maintains those same views about form and raises again the question "What are the constituents of a logical proposition ?"(p.198). Without a final commitment to answer the question in a definite way, he says:

"No particular things or relations can ever enter into a proposition of pure logic. We are left with pure forms as the only possible constituents of logical propositions. I do not wish to assert positively that pure forms - e.g., the form 'xRy' - do actually enter into propositions... but we may accept, as a first approximation, the view that forms are what enter into logical propositions as their constituents"(p.199).

This hesitant position leaves us without an account of form and so without an account of logical propositions. The independence between form and constituents, together with a denoting theory of meaning, makes the task an impossible one. They can only be postulated in a Platonic manner for the a priori is independent of the world:

"logical propositions are such that can be shown a priori without study of the actual world"(IMP,p.204).

When in 1937 Russell writes a new Introduction to The Principles of Mathematics he says that the logical constants must be treated as part of the language, not as part of what the language is about; they are not names of 'objects'. Nevertheless the account of them as bringing about 'form' and the truth of logical propositions does not yet seem clear to him:

"I confess, however, that I am unable to give any clear account of what is meant by saying that a proposition is 'true in virtue of its form'. But this phrase, inadequate as it is, points, I think, to the problem which must be solved if an adequate definition of logic is to be found"(p.xii).

There is no way in which one could disagree with Russell here: the notion of form and an adequate definition of logic are intimately connected. Nevertheless there is not yet a consensus as to what an 'adequate definition of logic' might look like.

32. It is hard to see how the early views of Wittgenstein influenced Russell 'profoundly' (see above p.95). Although he accepted the central tenet that there are no logical objects, Russell did not find an ultimate account for it within his philosophy. His system could not allow the inclusion of Wittgenstein's views. Wittgenstein sensed this at various times. For example, when Russell sent his Introduction to Mathematical Philosophy to Wittgenstein while the latter was still a prisoner of war in Cassino, Wittgenstein wrote after reading it:

"I should never have believed that the stuff I dictated to Moore in Norway six years ago would have passed over you so completely without trace. In short, I'm now afraid that it might be very difficult for me to reach any understanding with you. And the small remaining hope that my manuscript might mean something to you has completely vanished" (LR,p.70)

IV. A Central Problem in the 'Notebooks'

33. Wittgenstein, in 'Notes on Logic', has apparently succeeded in giving an account of the meaning of the indefinables - names and forms - by relating them directly to the things and facts in reality. No a priori Platonic world is invoked which can provide 'logical objects' as the meaning of those forms. Also, in this early writing there is no explicit doubt as to whether atomic propositions are of the subject-predicate form,

or of relational form, as Russell takes them to be. Neither does there seem to be any doubt as regards the fact that we know, or can know, subject-predicate or relational forms of atomic propositions by 'direct inspection', so to speak, since we can give meaning both to names and forms in their correlation with reality. But as soon as Wittgenstein brings in the notion of analysis and its allied notion of simples, two related problems appear to confront him, concerning (i) the existence of atomic forms and the manner in which they are known or given and (ii) the relation of the proposition to reality. For it is in terms of this relation that the meaning of the constituents and form of propositions must be understood. Let us consider the genesis of the problems and some of the tentative steps taken towards their solution, which will only be ultimately found in the Tractatus.

39. As early as in 'Notes on Logic' Wittgenstein explicitly makes manifest his belief in analysis and consequently in atomicity and simplicity; in other words, the constituents of propositions must be unanalysable:

"Every statement about complexes can be resolved into the logical product of a statement about the constituents and a statement about the proposition which describes the complex completely...i.e., that proposition which is equivalent to saying the complex exists" (NP, p.99; cf. TLP, 2.021).

At this stage the inner character of the unanalysable constituents is not of direct concern. It is assumed that they are simples, just as it is assumed that the subject-predicate and relational propositions, of which they are constituents, are atomic. That complexes are ultimately to be resolved into simple constituents is a necessity of the analytic method, but, Wittgenstein adds:

"How, in each case, the resolution is to be made is an important question, but its answer is not unconditionally necessary for the construction of logic" (Ibid.).

This optimism as to the construction of logic being unaffected by the actual process of analysis is soon put into question. In 'Notes Dictated to G.E. Moore', Wittgenstein realises that a proposition of the form 'aRb' is not an analysed one, so it is possible that in analysing it, a different form belonging to this atomic analysed proposition may be found. Perhaps the relational form of 'aRb' is not 'primitive', or perhaps other unknown forms may be found, affecting the nature of indefinables, i.e., constituents and forms. In the Theory of Descriptions something of this sort had been discovered. Hence, perhaps analysis after all will make a difference and be significant for the construction of logic. Wittgenstein raises this doubt, but opts for the view that in the end analysis will not discover new forms:

"When we say of a proposition of [the] form 'aRb' that what symbolises is that 'R' is between 'a' and 'b', it must be remembered that in fact the proposition is capable of further analysis because a, R and b are not simples. But what seems certain is that when we have analysed it we shall in the end come to propositions of the same form(°) in respect of the fact that they do consist in one thing being between two others" (NDM, p.110) ((°) my emphasis).

Whether such an analysis can be carried out then, appears not to be important, but naturally a question may immediately be raised as to what guarantees that, without reaching the atomic proposition in analysis, we can know its form and, furthermore, claim that it is the same as that of the unanalysed ones. Wittgenstein appears to have had a good reason for maintaining that even if the unanalysed propositions are not reached or directly known we can know their forms.

"How can we talk of the general form of proposition, without knowing any unanalysable proposition in which particular names and relations occur? What justifies us in doing this is that though we don't know any unanalysable proposition of this kind, yet we can understand what is meant by a proposition of the form $(\exists x, y, R) \cdot xRy$ (which is unanalysable); even though we know no proposition of the form xRy " (Ibid.) (my emphasis).

At this stage, then, Wittgenstein maintains that the form of atomic propositions can be known without knowing an instance of them. But the question is: what is it that guarantees that we can understand what is meant by ' $(\exists x, y, R) \cdot xRy$ ' independently of knowing any proposition (i.e. any fact) of that form? This understanding certainly involves an independence between the logical symbolism and what it may symbolise. This may be taken to be Wittgenstein's reason for holding such a view, for he also says:

"The question whether a proposition has sense (Sinn) can never depend on the truth of another proposition about the constituent of the first. E.g., the question whether $(x)x=x$ has meaning (Sinn) can't depend on the question whether $(x)x=x$ is true. It doesn't describe reality at all, and deals therefore solely with symbols; and it says that they must symbolise, but not what they symbolise" (NDM, p.116).

The claim that it is possible to have an understanding of the fact that symbols must symbolise without describing what they symbolise, appears to detach the symbolism from what makes it such a symbolism - from what might give it meaning, i.e., the facts of reality. But this detachment appears to be necessary at this stage for Wittgenstein, if sense is to be independent of truth. For whether a proposition has sense can never depend on the actual existing facts. Later in the Tractatus, Wittgenstein, while upholding the principle that sense cannot depend on truth, alters his reason as to why this must be so. We will now attempt to reconstruct the process that led him to such alteration.

35. If the propositional form ' xRy ' symbolises because there must be propositions of that form, then the symbolism, after all, depends for its meaning on reality. This brings us to the question of the actual relation between a proposition and reality. For it is on this relation that logical propositions will have to depend for their meaning, unless a Platonic world

is invoked, detached from the real one, and yet miraculously fitting it. Wittgenstein does not want to invoke such a world. Yet if sense is to be independent of truth, there must be a detachment of sense from the facts. This must be maintained if the understanding of sense is prior to the knowledge of truth. Wittgenstein puts it this way:

"That a proposition has a relation (in wide sense) to Reality, other than that of Bedeutung, is shewn by the fact that you can understand it when you don't know the Bedeutung, i.e., don't know whether it is true or false. Let us express this by saying 'It has a sense' (Sinn)" (NDM, p.111).

In a way similar to that in 'Notes on Logic', it is now said that one does come upon Sinn by analysing Bedeutung, i.e., by giving meanings to names and forms. ("The Bedeutung of a proposition is the fact corresponds to it" (Ibid.)). Thus Sinn cannot be viewed as 'detached' from what it symbolises, i.e., the facts. Nevertheless, the relation which a proposition has to reality when it is ascertained as true or false, so that the fact that corresponds to it is known, is a consequence of that other relation it must have in virtue of its sense, which must be independent of that correlation with the fact. But then, are not the facts presupposed since the things which constitute those facts are what give meanings to names and forms? Furthermore, how is this possible if those simple things are not reached in analysis in the atomic facts in which they occur? In 'Notes to Moore' Wittgenstein is not yet concerned with this question, but it constitutes one of the central problems in the Notebooks which will now be considered.

36. To have claimed that "we understand what is meant by a proposition of the form $(\exists x, y, R) \cdot xRy$ even though we know no proposition of the form xRy " appears to amount to a detachment of the knowledge or understanding of the logical symbolism from the actual knowledge or understanding of

ordinary propositions having this form. So, are the forms of atomic propositions given a priori, prior to any understanding of them - as Russell said? Wittgenstein has denied any possibility of seeking the meaning of forms in a Platonic world. But if those forms are also detached from the actual knowledge of this world, how are they given? Whatever the answer to this question be, it will have repercussions on what we are to understand by the sense of the proposition and its relation to reality independent of its truth or falsity. For if a proposition is understood we know what form the proposition has. But is this knowledge of form - as Russell thought - a precondition for the understanding of that proposition? Wittgenstein takes two steps to answer this question. Firstly, in the Notebooks he is led to deny any independence of constituents from form, thus moving away completely from Russell's position and from the position he first held in 'Notes on Logic'. Secondly, if forms can be accounted for in our understanding of the constituents composing the propositions, then the kind of relation that a proposition must have to reality - if its sense is gained independently of the facts, i.e., independently of truth value, - must be justified. Wittgenstein wrestles with these problems in the Notebooks and finds only a final solution in the Tractatus. Let us now consider what these two problems involve in the Notebooks.

37. There must be a connection between the form of the proposition and the facts, for there must be an account of the understanding of forms that is not Platonic-a priori in a Russellian fashion. Yet the forms cannot be given in the knowledge of facts, in experience, for

"if the individual forms are, so to speak, given me in experience, then I surely can't make use of them in logic"
(NB,19.6.15).

If forms are given in experience then logic would be founded on contingent experience, i.e., on the truth of the existence of forms in facts. This would amount to invoking the Russellian 'logical experience' with almost the same unacceptable consequences for logic which Wittgenstein had shown followed from Russell's views. How, then, are forms - the knowledge of which is necessary for the understanding of propositions - related to the facts? What do we know of their existence? To answer that we simply understand them and that therefore they must be there, is not enough. This appears to be one of the central ideas in the opening paragraphs of the Notebooks.

"How is it reconcilable with the task of philosophy, that logic should take care of itself? If, for example, we ask: Is such and such a fact of the subject-predicate form?, we must surely know what we mean by 'subject-predicate form'. We must know whether there is such a form at all. How can we know this? 'From the signs'. But how? For we haven't got any signs of this form. We may indeed say: We have signs that behave like signs of the subject-predicate form, but does that mean that there really must be facts of this form? That is, when those signs are completely analysed? And here the question arises again: Does such a complete analysis exist?" (NB, 3.9.14).

The problem may be presented in terms of the false proposition. For it is evident that in this case the proposition makes sense, is understood, and so, has a form. Then the question becomes:

"How can there be such a thing as the form of p if there is no situation of this form? And in that case, what does this form really consist in?" (NB, 29.10.14).

38. Having denied forms the status of logical objects, but having granted them the status of 'indefinables', they are still owed a necessary status of independence from constituents. Now even this status of independence is denied. Wittgenstein relying on the intuition that a Platonic world cannot solve the problems of the understanding of ordinary propositions, claims that the resources must be drawn from that

which we naturally seem to know i.e., the ordinary propositions as such, because

"if that is not how it is, then what is lacking would have to be shewn by means of some kind of experience, and that I regard as out of the question" (NB,3.9.14).

A dilemma clearly arises if analysis is required. Either a proposition must provide for an account of itself as a proposition of such and such a form, or a fact that corresponds to the proposition must do so. This fact would be reached by process of analysis and ultimately known in experience. But then logic is ultimately based on experience, and therefore on the contingency of an existing fact, i.e., on the truth about the existing form guaranteed in acquaintance. But this is out of the question for "logic must take care of itself". It must be self-contained and independent of the self-evident truths of experience, be it 'empirical experience' or 'logical experience'. The principle has already been denounced:

"The 'self-evidence' of which Russell has talked so much can only be dispensed with in logic if language itself prevents any logical mistake. And it is clear that that 'self-evidence' is and always was wholly deceptive" (NB,8.9.14).

The option left open is clear: propositions must show everything needed for an account of themselves. But the option carries with it a problem, given the premiss of analysis: (i) we seem to understand 'forms' independently of - or without knowing and so without reaching - the ultimate simple constituents, or without deriving them by analysis of actual analysed propositions; hence, (ii) we are inclined to say that unanalysed propositions, the propositions of ordinary language, may possess the same forms as the analysed ones. Then logic is applicable to ordinary sentences, and analysis appears to be unnecessary, but

"our objection-in-chief against unanalysed subject-predicate sentences was that we cannot construct their syntax so long as we do not know their analysis," (NB,7.9.14).

for without knowing their syntax we do not know what follows from them. In other words, analysis makes a difference to the real form of propositions. Is this in fact so ?

"But must not the logic of an apparent subject-predicate proposition be the same as the logic of an actual one ?" (Ibid.).

If we can indentify an unanalysed proposition as one of a subject-predicate form, must we not know what we mean by a subject-predicate form ? But then form is given in the unanalysed proposition, and so this form is the same as that of the analysed one. That is why it appears that logic can be applied to ordinary propositions (NB,20.6.15;21.6.15) and so analysis appears somehow superfluous. In addition, that is why the connected problem of simples and whether they are reached in ultimate analysis, may also be a pseudo problem. From this it would now seem as

"if in a certain sense all names were genuine names. Or, as I might also say, as if all objects were in a certain sense simple objects"(NB,16.6.15).

The commitment to ultimate level analysis is not definite in the Notebooks. So, the gap between our understanding of form as gained in the understanding of ordinary propositions, and that of the form of atomic propositions is not bridged.

39. There is something to be noted. If ordinary propositions are considered to say something, to be pictures, and yet contain 'complex objects', i.e., be general propositions, then something will be left open, not said; quantifiers will appear. Thus the one- one correlation cannot obtain as in the purported atomic propositions with simples. This seems to mean that the forms of particular cases must be implicitly contained in the general proposition:

"If generalisations occur, then the forms of the particular cases must be manifest - and it is clear that this demand is justified, otherwise the proposition cannot be a picture at all, of anything" (NB,17.6.15).

The general proposition may be considered, then, as a 'protopicture'.

Analysis will have to bring out the particular cases to make manifest all that the proposition contains. Hence constituents will have to be reached. Here the commitment to determinacy of sense enters and necessarily requires analysis:

"The demand for simple signs is the demand for definiteness of sense" (Ibid.).

What forms are, and how they are known, is not a question detached from what simples are and whether they are reached in ultimate analysis. For Wittgenstein now believes that forms are given in our understanding of constituents:

"The logical form of the proposition must already be given by the forms of its component parts. (And these have to do only with the sense of the proposition not with their truth and falsehood)" (NB,1.11.14).

Why is this so ?

40. The answer is that forms cannot stand for any reality different from constituents. There are no more objects or things than the ordinary propositions reveal. Wittgenstein repeats this various times in the Notebooks but perhaps the most convincing reason for his new position is given in one of the passages that also occurs in the

Prototractatus:

"The reality that corresponds to the sense of a proposition cannot be anything other than its constituents; since we are, surely, ignorant of everything else" (p.237).

Wittgenstein has weighty reasons for thinking that this must be so.

"If the reality consists in anything else as well, this can at any rate neither be denoted nor expressed; for in the first case it would be a further component, in the second the expression would be a proposition, for which the same problems would exist in turn as for the original one" (NB,20.11.14).

In knowing constituents the forms of the propositions which compose them will be given, for,

"The logical connexion must, of course, be one that is possible as between the things that the names are the representatives of, and this will always be the case if the names really are representatives of the things. N.B. that connexion is not a relation but only the holding of a relation" (NB,4.11.14;cf.3.4.15).

Hence it is on our knowledge of how "names are really representatives of things" that the account of the sense of a proposition, and so its capacity of being either true or false independently of any truths, rests.

41. Pictures seem to fulfil this condition of making sense independently of their truth or falsity:

"The proposition in picture-writing can be true and false. It has a sense independent of its truth or falsehood. It must be possible to demonstrate everything essential by considering this case" (NB,29.9.14).

This is one of the thoughts which occurs in the early part of the Notebooks where the picture theory of the proposition begins to emerge and by means of which Wittgenstein's doctrine of representation will crystallise. Its main goal will be the attempt to show how the a priori nature of logic must be justified "by the symbol alone" and that must be based on our understanding of ordinary propositions whose truth and falsehood cannot be known by the symbol alone, since their truth and falsity are 'external' to them. The picture theory finds its final formulation in the Tractatus, but there are certain conditions which the early doctrines and the Notebooks require it to fulfil:

(i) The fundamental one - the constant in all the early doctrines - is the need to account for the proposition having a sense independent of its truth or falsity.

(ii) The account of form cannot be given independently of constituents; it is the reality of constituents that we know for "we are, surely, ignorant

of everything else" (PT,p.237). Then it is only via constituents that the proposition and what it represents will be established, and this will make it possible for the proposition to represent the combination of things. But a problem crops up that has to be solved. "How can a combination of objects be possible when it does not exist ?" This combination, Wittgenstein contends, will be possible "if the names really are representative of things".

(iii) This must mean that the proposition and the fact represented by it, the picture and what it pictures, have something in common:

"The theory of logical portrayal by means of language says - quite generally: In order for it to be possible that a proposition should be true or false - agree with reality or not - for this to be possible something in the proposition must be identical with reality" (NB,20.10.14).

What is identical between picture and reality is the "form of the picture" (Ibid.). given in the constituents, whose combination will enable us to see the logical structure of the state of affairs that makes it true or false.

42. The first priority of representation. Wittgenstein's attempt to give an account of representation (i.e., of language—world relation in terms of picturing) soon leads him to grant priority to the structure of the world over that of language. What will be the consequence of this priority ? He says on 19.10.14:

"My mistake obviously lies in a false conception of logical portrayal by the proposition. A statement cannot be concerned with the logical structure of the world, for in order for a statement to be possible at all, in order for a proposition to be CAPABLE of maing SENSE, the world must already have just the logical structure that it has. The logic of the world is prior to all truth and falsehood".

If the world has a structure which is presupposed by language then this structure cannot be conferred on the world by language. The structure of the world must be prior to that of language. Language cannot be

concerned with the question as to whether or not there is such structure in the world. Language cannot present hypotheses to be verified later, as Russell tends to think it can. The world must have a structure, and a 'fixed one' for that matter (NB,17.6.15). For if it did not have one, how could it be said that language represents it? That is, how could a proposition be a picture capable of making sense, i.e., being either-true-or-false? The Tractatus puts the question in a similar anti-Russellian way:

"Can we set up a form of sign without knowing whether anything can correspond to it? Does it make sense to ask what there must be in order that something can be the case?" (5.5542).

Language cannot settle what there must be in order that something can make sense. What there is, must be prior. The world must be prior for language to be capable of representing it truly or falsely. That is, the logic of the world is prior to all truth and falsehood.

But this inevitably raises a question concerning the relationship between language and the world. How is it that the 'logic' of the world, being prior to language, is nevertheless represented by the logic of language so that it might be given a priori, i.e., independently of the actual structure of the world? We may recall that Wittgenstein has adhered in earlier writings to the idea that a symbolism may be detached from what it symbolises and so be understood independently of any reality that it may be capable of describing (see above pp.107-108; there are also passages in the Notebooks which seem to be consonant with this idea, e.g., 31.5.15; 1.6.15). But then how is it that the structure of language and that of reality, e.e., the two 'logics', match, coincide, fit each other, so that one can represent the other? For it is clear that the propositions of language must reflect the structure of the world -- the structure of the state of affairs constituting the world -- if any agreement

or comparison between the two is to take place. If both logics are the same, and are shared, as Wittgenstein believes, and if that of the world is prior, how can we account for the same structure in language? And how far does the structure of the world determine that of language?

43. Perhaps the problem can be posited in the form of a dilemma. One of the horns would be the Russellian position, which Wittgenstein wants to deny. The other horn would be the rejection of Wittgenstein's own commitment to the view that sense is prior to and independent of the actual facts which make it true or false. That is, the sense priority thesis would have to be denied, which is precisely what his theory of representation attempts to explain. Let us consider why this is so.

We are told that the propositions of language presuppose the world in order to be capable of making sense. If that were not so, logic could exist even if the world did not exist, as Russell believed. That is to say, logic as the essence of language, would be totally a priori, its structure totally independent of the world. It would not need to presuppose the world. There would be logical structures and logical truths regardless of any existing world. But then the question would arise as to why the application of a priori logical structures to ordinary propositions concerning the world, would be possible. Put differently, why is it that language and the world, though totally independent of each other in their structures, nevertheless match or fit each other since - as Russell and Wittgenstein believe - the structure of language reflects the structure of the world? We might also put it this way:

"if there would be a logic even if there were no world, how then could there be a logic given that there is a world ?"(TLP,5.5521).

Logic is about the world, it "has to be in contact with its application" (TLP,5.557). If there is not such a contact the actual application would be a "miraculous match".⁽⁹⁾ Thus, the fact that the world is presupposed in language's capability of making sense, is not meant, according to Wittgenstein, as something presupposed simply because language needs something to fit into, and just happens to fit into or represent the world. Language and the world cannot be totally independent, unless the miraculous is invoked to account for the way they fit each other.

44. Then, and this is the second horn of the dilemma, how are language and the world in contact with each other ? One way of answering the question is to say that since the structure of the world is prior to that of language, and language necessarily reflects it, then, it may be concluded, the structure of the world determines completely the structure of language. In other words, the propositions of language presuppose and reflect the facts of the world which constitute the world's structure (TLP,2.034,2.04), and which the propositions are about. But if this is so, the sense of a proposition is dependent on the facts that make propositions in general true or false. This denies the essence of what constitutes a proposition as a picture, i.e., having a sense independently of its truth and falsity. That is to say, the sense-priority thesis is denied, for this means that there would have to be (at least) some true propositions reflecting the prior structure of the world, by means of which the sense of other propositions could be accounted for. In other words, in some propositions at least, the conditions for truth would merge with the conditions for sense.

But the theory of representation which attempts to account for the bipolarity of the proposition, is precisely the attempt to show that any proposition can represent the structure of the world (that of a state of affairs) independently or prior to the actual confrontation with the facts which makes the proposition true or false. Hence, it is not clear in what way, if any, the structure of the world determines the structure of language.

45. To sum up: considering what Wittgenstein holds about sense-truth independence and about the priority of the world structure, there are two claims which have to be reconciled:

- (i) The propositions of language represent the world structure and yet the world structure is prior to that of language.
- (ii) The propositions of language represent the world structure prior to the actual comparison of the propositions with the facts constituting that structure.

Claim (ii) carries with it the implication that the prior representative capacity of language, i.e., sense, cannot be determined by the actual structure of the world, for this makes sense dependent on the facts, in other words, dependent on truth. Thus, although the world structure must be prior to the structure of language, this latter must be also prior to and independent of that of the world, i.e., a priori. Is this not the Russellian position? How are the two 'priorities' to be maintained without being caught on one of the horns of the dilemma? For if the structure of language is prior and a priori, i.e., independent from that of the world, then (i) above is unaccountable for or involves a miraculous match. But if it is dependent then (ii) above has to be negated. How can the claims be reconciled? Is there a way out of this dilemma? What kind of relationship of dependence and independence between language and the world is Wittgenstein trying to maintain? To the Tractarian answer to this question we now turn.

CHAPTER THREE

THE ISOMORPHISM OF THE 'TRACTATUS'

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THE ISOMORPHISM OF THE 'TRACTATUS'I. The New Premises

1. The Tractarian version of isomorphism may be regarded as an attempt to account for the essential connection that there must be between language and reality if language is to represent reality independently of what actually obtains, i.e., independently of the facts. This can only be so according to the Tractatus, if the world has a substance. The substance of the world is its form.

The investigation in this chapter will centre around this question: why is the form of reality or the substance of the world required in order to account for the independence of sense from truth-value? That the world has a substance in the manner that the Tractatus conceives is a new premiss which must be combined with what the pre-Tractarian doctrines have already established as conditions for the account of representation. These are as follows: that the forms of propositions are given in the understanding of their constituent parts; that this can be so if those constituent parts, i.e., names, are really representative of things; that the sense of an elementary proposition cannot depend on the truth of any other proposition; that this sense must be 'determinate' (understood not simply in terms of the Russellian isomorphic demand of the one-one correspondence between name and thing but also in terms of the Fregean demand of 'completeness of definition',

which mutatis mutandis, as Wittgenstein says, applies to names (NL,p.104)), that is to say, the meanings of the names must be fully given in advance so that a new possibility cannot be discovered later; that the relation which a proposition has to reality in virtue of its sense must be different from the relation it has in virtue of its truth. The Tractatus subscribes to all these accepted premisses, but also to a further and more general kind of principle: the world has an essence or a substance that can only be revealed in language. Not by what language says, though, but by what it shows. This is so because the Tractarian world is only accessible through language. Language is about the world, so the world is that which is talked about and made manifest in that talk. It is in terms of the new elements or new steps taken in the Tractatus that a final answer is given to the question concerning the relation between language and the world. Let us trace back the question briefly to the pre-Tractarian writings in order to make clearer the crucial point of development of Wittgenstein's earlier thought to the Tractatus itself and to set the background against which the discussion in this chapter is conducted.

2. It may be perhaps useful to recall again Wittgenstein's comment in 'Notes Dicated to Moore':

"That a proposition has a relation (in a wide sense) to Reality other than that of Bedeutung is shewn by the fact that you can understand it when you don't know the Bedeutung, i.e., don't know whether it is true or false. Let us express this by saying 'it has sense'" (Sinn) (NDM,p.111).

At this early stage Wittgenstein believes that the "Bedeutung of a proposition is the fact that corresponds to it" (Ibid.). But in the Notebooks he has made clear that the 'reality' (the Bedeutung) that corresponds to the proposition is that which corresponds to its

constituents. That is why in the Tractatus it is explicitly maintained that only names have Bedeutung and only propositions have Sinn. The thesis that the proposition must have a two-fold relation to reality - as Wittgenstein has put it in 'Notes to Moore' - finds expression in the Tractatus in what has to be considered one of its fundamental tenets:

"a proposition has a sense which is independent of the facts" (4.061).

This means that

"one can understand it, therefore, without knowing whether it is true" (TLP, 4.024).

for to understand a proposition is to understand its sense, which is what it represents (TLP, 2.221), and what a proposition represents "it represents independently of its truth or falsity" (TLP, 2.22). Sense is prior to truth or falsity, i.e., to the actual truth-value of the proposition. This is so because the world has a substance:

"If the world had no substance, then whether a proposition had sense would depend on whether another proposition was true. In that case we could not sketch out any picture of the world (true or false)" (TLP, 2.0211-2.0212).

A proposition's truth or falsity is determined by the facts. The proposition, then, must be seen to agree or disagree with the facts, it must be measured against them to ascertain its truth or its falsity (TLP, 2.223). But it is in virtue of its sense that a proposition represents, that it may be either-true-or-false, i.e., be a picture:

"a proposition can be true or false only in virtue of being a picture of reality" (TLP, 4.06).

Hence, in a proposition the sense-reality relation is distinct from the truth-reality relation, i.e., the relation to what is actually the case, what obtains. But these relations, although distinct, are inseparable. The truth-relation is dependent upon the sense relation. For to understand the sense of a proposition is to know what is the case

if it is true (TLP,4.024). Therefore an account of the sense-reality relation will also account for the truth-reality relation. In the last chapter we saw how Wittgenstein in the Notebooks could not succeed in accounting for the contact that a proposition must have with reality in virtue of its sense, without having to deny the very principle he wanted to explain: 'sense is independent of the facts'. Why could not the question be ultimately solved in the Notebooks and by what means is a solution found in the Tractatus ?

3. The answer lies in this: In the Notebooks the world appears as something actual, as that which is the case, the facts that obtain. Prima Facie this is also the manner in which the world is conceived in the Tractatus. "The world is all that is the case", i.e., the facts (TLP,1-2). But still there is a crucial difference: the factual word of the Tractatus unlike the pre-Tractarian one has a substance. This answers the question posed in the Notebooks "Is there no domain outside the facts ?" (NB,27.5.15). The facts, what obtains, is the actual but its underlying ground is substance, the form of reality, the source of possibilities that ultimately accounts for actualities. Thus the world is now conceived as what is actual and what is possible, as facts and substance.⁽¹⁾ The latter is the ground of the former's intelligibility and its real status. Substance is not "outside" the domain of the facts as something extraneous to it; it is the 'what' of the world, its very core. What does this have to do with the sense-reality relation we are in search of ? What is the connection between 'sense being independent of the facts' and the substance of the world ?

The substance of the world is both "form and content" (TLP,2.025) and it is this form of the world that is contained in language, and so

shared by language and the world (TLP,2.17). Form is the common element in language and the world that enables language to represent the facts. Form gives language its representative capacity. It is the first necessary condition of representation on which all other conditions depend, for the sense-reality contact is made in form, not in the correlation with actual facts. Form is what can explain how it is that the proposition has a sense independent of the facts and yet represents those facts which make it true or make it false:

"What a picture represents it represents independently of its truth or falsity, by means of its pictorial form" (TLP,2.22).

The account of this connection, sense-form, as being at the centre of the Tractarian doctrines is intimately related to what Wittgenstein considered to be the cardinal problem of philosophy: what can be said and what can only be shown.

4. The development from the Notebooks to the Tractatus which may be seen in terms of the emergence of the notion of the substance of the world may also be seen in terms of the emergence of the distinction form/structure. These two notions, and their relatedness are central in Wittgenstein's doctrine of isomorphism, as we shall presently see. It is by means of the function this distinction plays in the theory of the proposition that the dilemma posed at the end of the last chapter as inescapable (see above pp, 117ff.) is resolved. In the Tractarian theory it is not the structure of the world that determines directly the structure of language; rather, the world determines language via form. Now form becomes "the possibility of structure".

5. Something should be said of the use of 'form' and 'structure' in the Notebooks and in the Tractatus. Wittgenstein is consistent in

using 'structure' in both works as actual configurations of symbols or things. For example, it is said in the Notebooks that the contradiction 'p. \wedge p' is a logical structure (NB,16.10.14) and also, as we have already heard:

"The proposition must enable us to see the logical structure of the situation that makes it true or false" (NB,20.10.14).

The term 'form' on the other hand is that which expresses what must be shared by picture and reality, if portrayal is to take place at all (Ibid.), and it is something that cannot be described (Ibid.). So, although it is clear that Wittgenstein distinguishes at this stage the notion of 'form' from 'structure', nevertheless these notions are not yet clearly defined, and the theory that brings the two terms into close connection has not yet emerged. This is another indication of the development of Wittgenstein's views from the Notebooks to the Tractatus. This is a reason why it might very well be misleading at times, rather than helpful, to bring a remark of the Notebooks to support another of the Tractatus without discrimination⁽²⁾.

6. The remark that best appears to encapsulate the development from one book to the other concerning the distinction form/structure is 2.033:

"Form is the possibility of structure".

This characterisation of form is fully Tractarian, and brings to the fore the connection between the notions of 'form' and 'sense' with 'possibility' (or 'possibilities'). This triple connection form-sense-possibilities is not only central in the Tractatus but is an idea that may be seen to run as a continuous thread in Wittgenstein's philosophy. That the characterisation of form in terms of possibilities is fully Tractarian can be further confirmed by the following: These most

crucial remarks in which form is defined in terms of possibilities do not occur in any of the earlier writings including the Prototractatus:

- 2.014 Objects contain the possibilities of all situations.
- 2.0141 The possibility of its occurring in states of affairs is the form of an object.
- 2.033 Form is the possibility of structure.
- 2.151 Pictorial form is the possibility that things are related to one another in the same way as the elements of the picture.

Also, it is interesting and revealing to note the difference that there is between remark 2.15 as it occurs in the Prototractatus and its final formulation in the Tractatus. The first part is the same, it is in the second part that the change is significant:

Prototractatus

2.151
The fact that the elements of a picture are related to one another in a determinate way represents that things are related to one another in the same way.

2.15101
This connexion of the elements of a picture is called its pictorial form.

Tractatus

2.15
The fact that the elements of a picture are related to one another in a determinate way represents that things are related to one another in the same way.

Let us call this connexion of its elements the structure of the picture, and let us call the possibility of this structure the pictorial form of the picture.

7. Max Black, in his Companion to Wittgenstein's Tractatus, remarks that the distinction between form and structure in the Tractatus has troubled commentators as able as Ramsey, for "It is doubtful whether it is needed" (p.66). Other commentators acknowledge the fact that it is hard to see what Wittgenstein wants the distinction to mark, e.g., J. Griffin (1964, p.72). Following a more recent interpretation of the distinction, e.g., Parkinson (1976), we will attempt to clarify its

importance. For it appears to have something to do with (i) the understanding of Wittgenstein's conception of isomorphism and with relation of language and reality; (ii) it is at the heart of the picture theory and so of the account of how a proposition represents independently of its truth and falsity; (iii) it is a central distinction in the differentiation between empirical propositions and logical propositions; (iv) finally, the distinction is connected to other parallel distinctions, i.e., sense and truth, possible and actual, the question 'what' and the question 'how' and to what can be said and what can only be shown - a distinction which involves the mystical. It is also worth noting that the priority of sense over truth, the priority of possibilities over actualities, the priority of the question 'what' over the question 'how' are not unrelated to the priority of form over structure.

8. Before we enter into a more detailed discussion of the notions form/structure something must be said about the philosophical aim of the Tractatus which makes language its point of departure, i.e., a language that must share the form of the world. In the Notebooks Wittgenstein says his

"work has broadened out from the foundations of mathematics to the essence of the world"(3).

The Tractatus Logico-Philosophicus, whose two central themes, as the name indicates, are logic and philosophy, sum up the outcome and development of the movement. The way logic and philosophy are related in the Tractatus has recently been put by B.F. McGuinness in the following terms: Wittgenstein in the Tractatus "is doing logic and basing philosophy upon it".(1976,p.6). Neither logic, nor philosophy, are empirical sciences for Wittgenstein. Philosophy is either above or beneath them, but not science alongside with them, for

"philosophy and logic have to do not with a special realm of objects, but with the necessary features of language". (Ibid.p.8).

Philosophy is a critique of language, for only by being so does it become aware that what it attempts to say is unsayable, namely, the essence of the world. Thus, McGuinness' remarks could be qualified by saying that it is this essence of the world which is the subject matter of philosophy revealed in the necessary features of language. In Philosophical Remarks (1929), although Wittgenstein has moved from the Tractarian doctrines, he is still close to his early thought:

"Philosophy, if it were to say anything, would have to describe the essence of the world...
 What belongs to the essence of the world simply cannot be said...
 Language can only say those things that we can also imagine otherwise...
 Philosophy as custodian of grammar can in fact grasp the essence of the world, only not in the propositions of language" (54).

This essence is grasped by means of what can be said, in what can only be shown. This is also the idea conveyed by Wittgenstein in the Preface to the Tractatus - (of which he emphatically remarked to Ogden in one of his letters: "the preface is part of the book" (LO,p.55, his italics) - where we are told of the overall intention and aim of the book: "to set a limit to thought". This limit can be set only in language, which is the expression of thought. In setting a limit on what can be said we become aware of what is beyond that limit, and so of what cannot be said but only shown. This is the cardinal problem of philosophy. What can be shown is the essence of the world, or what Wittgenstein will also call 'The Mystical', i.e., the 'What' of the world or its substance. This lies beyond what language actually says, but nevertheless it is disclosed in the necessary features that make those sayings possible. So it is only by consideration of these features that we may come to

know what the real problems of philosophy are.

9. This may also be taken as the reason why the Tractarian ontology is relative to linguistic presuppositions and necessarily so. It is derived and defined in the establishing of linguistic requirements. Language is the given, the point of departure. Language is essentially non-self-referential, it is about something, i.e., the world. That is why perhaps the Tractatus begins with a characterisation of the world, and not of language itself. Nevertheless the world even in the opening remarks is the world talked about, i.e., seen through language. For language is constituted by propositions that may be true or may be false about the facts of the world. They must be one or the other, for "what can be said at all can be said clearly" (Preface), there is no third possibility. The sharp boundaries of language are those of the world. The Tractarian language is one that represents the world in propositions that have sense independent of what actually obtains - they may be true or false - they have a sense that does not presuppose truth, and whose sense is a determinate one. Language represents what we imagine the world to be (TLP, 4.01), and this representation, because of what we take language to be, is isomorphic. The isomorphic correspondence between language and reality is in the Tractatus such that every ontological thesis finds its ultimate justification in a logico-linguistic one, i.e., ultimately in a requirement of linguistic representation. Semantics and ontology are so inseparable that they are literally 'isomorphic' even in their doctrines, as we shall presently see. This is not because language and the world are two parallel realms, somehow independent of each other, but whose structures can be correspondingly coordinated. Such is the view that some commentators have, including Hertz whose

doctrines inspired the picture theory. Recently R.J. Fogelin expressed it in the following terms:

"we shall search the 'Tractatus' in vain for [linguistic] arguments supporting the basic atomistic commitments" (1976,p.14-15).

This is precisely what the Tractarian isomorphism appears to deny.

It is in the linguistic commitments that the ontological ones are embedded and so revealed, for it is only language that can show the essence of the world. To this question of isomorphic representation we know turn.

II. Tractarian Conditions of Isomorphic Representation

13. There are four fundamental requirements in terms of which the isomorphic relation between language and reality is seen in the Tractatus. They are contained in Wittgenstein's account of the picture theory of the proposition which sets the conditions for representation to take place, i.e., sets the conditions for proposition's sense to be independent of the facts. The requirements are:

(i) Equal numerical mutliplicity of elements in what represents and what is represented, or in what pictures and what is pictured (2.15,4.04)

(ii) Structure as the determinate relation holding between the elements of what represents which make it into a fact not a 'mixture' (2.14,2.141,2.15); and as a determinate relation holding between the things of the state of affairs which is represented (2.032,2.033,2.15).

(iii) Logico-pictorial form as the possibility of the structure of both elements and things. This possibility is shared by what represents and what is represented. It is what makes the former capable of becoming a representation of the latter and so brings both facts into the representing relationship (2.15,2.151,2.2).

(iv) The pictorial relationship which correlates the picture's elements with things (2.1513,2.1514), and makes the elements (names)

become "representatives" of things. In this 'representativeness' of things by names lies "the possibility of propositions"(4.0312).

10. We may recall that three of these conditions are proper to Russell's version of isomorphism, namely (i) equal numerical multiplicity, (ii) structure and (iv) the pictorial relationship which could be taken to fulfil the function of Russell's correlator. But the introduction of pictorial form, and so the distinction in function between form and structure makes the Tractarian version a totally different one. The inclusion of pictorial form is not just one item more added to the other three, as it prima facie appears, but one that requires 'reinterpretation' of all the other conditions, thus making Wittgenstein's isomorphism different from Russell's. It may be remembered that for Russell the terms 'form' and 'structure' are equivalent; they mean "the way the constituents are put together"(e.g., OKEW, p.52). Also, we may recall that he describes the correlation that one fact must have to another, in order for the first to represent the second, as a structural correlation, i.e., a one-one relation between the elements of the two facts (see above p.26). According to Russell, it is this structural correlation which gives the fact its representing capacity. In other words, the structural correlation is the necessary and sufficient condition that makes representation possible.

Russell interprets Wittgenstein's doctrine of structure in terms of his own conception of structural correspondence. Commenting on the Tractatus Russell says in My Philosophical Development:

"In emphasising the importance of structure I still think he was right..."(p.84).

a few lines before he has said:

"Perhaps the basic doctrine in the philosophy of the Tractatus is that a proposition is a picture of the facts which it asserts".

This picturing is interpreted by Russell purely in terms of 'similarity of structure' and illustrated with an analogy:

"A map clearly conveys information, correct or incorrect; and when the information is correct, this is because there is a similarity of structure between the map and the region concerned" (Ibid.).

The important question for Wittgenstein is how this 'similarity of structure' is possible; or how this 'similarity of structure' can account for the internal relationship between language and reality. If a structure is capable of representing another structure prior to the correlation with it - as the Russellian interpretation assumes - then the capacity of representing cannot be given by such correlation but rather it must be its precondition. Thus, the representative capacity that the structural correspondence is meant to explain, becomes its very presupposition. Since the question as to how language must be related to the world is not of primary concern for Russell, he appears to be content with the 'similarity of structure' account, and so must take the structural correlation as a manner in which such a relation can be explained. This account implies that the structures of two correlated facts - the one which represents and the one which is represented - are independent of each other. That is to say, the structures must already be there, so to speak, before the correlation is made. Thus, the structure of language - or language in its 'analysed' form - is a priori, i.e., is independent of what it represents. How this a priori structure of language 'fits' the structure of the world is not really accounted for by Russell. His 'similarity of structure' doctrine only states that there can be a matching between the two.

interprets Wittgenstein's conception of picture, or the proposition as a fact being a representation of another fact, in a Russellian manner.

This is not explicitly stated, but implied in what she says:

"Thus there are two distinct features belonging to a picture (in the ordinary sense of 'picture'): first, the relation of the elements of the picture; and second, the correlations of the elements in the picture with things outside the picture; and as we have seen, the first feature must belong to a picture before the second can; only if significant relations hold among the elements of the picture can they be correlated with objects outside so as to stand for them. The correlating is not something that the picture itself does; it is something we do" (p.68).

The pictorial relation consists in the correlation with objects (2.1514), which Miss Anscombe calls external (p.67). Therefore, it is something which does not make the picture a 'picture of' intrinsically or internally, but rather is said to be something added on to its being a picture or fact in its own right.

It is clear that by requiring of picturing two features (i) the relation between the elements of the pictures - the elements in structure - and (ii) the correlations of the elements of the picture with things outside, the isomorphic relation between what pictures and what is pictured is viewed in Russellian terms; the correlation between elements and things may be interpreted as Russell's structural correlation which makes a picture into a 'picture of'. This is something external. This interpretation of the Tractarian isomorphism necessarily has to maintain that if the two structures (i.e., of what pictures and what is pictured) are externally related then they must be 'independent' of each other. That the structure must be independent is a precondition of this correlation being made, for a picture must first be a picture in its own right, or as Miss Anscombe puts it also, there must be "significant relations" holding between the elements of the picture prior to their correlation to the things outside it.

But, of course, the question arises as to how those 'significant relations' are existent prior to the correlation being made, and yet capable of such correlation. Also, if the correlation is said to be external, then certain true propositions are required expressing such correlation. For in order to correlate an element of a picture with a thing, the thing must be identified under a certain description as having a certain property - a 'material property' Wittgenstein would say. This would only express a 'contingent truth', that nevertheless would have to stand at the basis of picturing, stating what a thing is. But this, according to Wittgenstein, cannot be said. Nor can there be true propositions at the basis of language making sense possible. Furthermore, if the relation between what pictures and what it pictures is external, then Wittgenstein's doctrine concerning their essential relation (TLP,4.03) must be denied.

G.J. Warnock explicitly states that Russell's and Wittgenstein's conception of isomorphism, i.e., their views about the connection between language and reality, are similar:

"Like Russell, he [Wittgenstein] located the real link between language and reality in the relation of atomic propositions to atomic facts".

Warnock does not see that Wittgenstein's distinction between form and structure makes a difference here:

"these elements must not only be present; their structure, form or arrangement must be the same - according of course to some system of projection" (1969, p.49).

12. Miss Anscombe's views and related ones will be discussed later on, but for the moment it can be stated that Wittgenstein is emphatic in saying that what gives a picture its pictorial capacity is form - more accurately, form is the pictorial capacity of the picture. Hence the 'pictorial relationship' by means of which form is shared by a picture and what is

pictured (TLP, 2.151; 2.1511; 2.1514) cannot be understood as an external structural correlation, as Miss Anscombe takes it (see above p. 133); but rather as something which we may call a formal correlation of an internal character. The implications of this two-fold manner of correlation will be examined later. But it is clear that for Wittgenstein form:

(i) gives a picture its representative capacity:

"What a picture, of whatever form, must have in common with reality in order to be able to depict it - correctly or incorrectly - in any way at all, is logical form, i.e., the form of reality" (2.18);

(ii) enables a picture to represent independently of truth value:

"What a picture represents it represents independently of its truth or falsity, by means of its pictorial form" (2.22);

(iii) accounts for the essential relation that there is between a picture and what it represents, for it is form that makes a picture into a picture:

"A proposition must use old expressions to communicate a new sense. A proposition communicates a situation to us, and so it must be essentially connected with the situation. And the connexion is precisely that it is its logical picture. A proposition states something only in so far as it is a logical picture" (4.03).

In order to be able to derive the implications of these three features of representation suggested by the above remarks, we have to ask first: What does Wittgenstein understand by form? Why is it different from structure and defined as it possibility? We shall presently attempt to answer these questions in so far as they are related to the proposition as a picture of reality, i.e., to the sense of the elementary proposition on which the relation language-reality depends.

13. A conception of isomorphic representation requires two realms: that which represents and that which is represented. In the Tractatus these are language and the world. The ontology and the linguistic theory in the Tractatus are 'isomorphic' in a very real sense. And their relationship is such - as was said earlier - that the linguistic requirements determine and

yield the ontological ones. For example, the fundamental categories that stand for what is represented - categories that might be called ontological - are objects, states of affairs, facts, the world and reality. To these correspond respectively: names, elementary propositions, conjunction of propositions, the totality of true propositions, and language as the totality of all propositions true and false. There are two terms that belong to both realms: form and structure. Form, we are told, is literally the link between what represents and what is represented, that which makes possible such a representation. One and the same form belongs to both realms, it is shared by both, and makes the structure of what represents be capable of representing the structure of what is represented. In the Tractatus it is structure that actually represents - only facts can express a sense (TLP,3.142) ; this is possible because of form. For form is the possibility of structure. This form is primarily an ontological category, the form of reality (TLP,2.18). But nevertheless it is contained in language, shared by it, or "absorbed" by language, as D.F. Pears, puts it⁽⁴⁾. In what way does this form belong to reality so that it can be 'absorbed' by language? Where is this form of reality to be found and in what does it consist? The answer must be sought in the ontological notion of the 'form of objects'.

III. Features of Form

14. The notion of form is first introduced in the Tractatus in connection with objects. It is upon the form of objects that the whole of the Tractarian system is founded. There are four features applicable to form on which its elucidation may centre: Form as

- (i) the possibilities inherent in objects
- (ii) the substance of the world
- (iii) the precondition of linguistic representation
- (iv) the possibility of structure

15. (i) Form as the possibilities inherent in objects. The Tractatus opens with the claim that the world is all that is the case. What is the case are the existing states of affairs, the facts. Each state of affairs is a combination of objects. At 2.0141 the form of an object is defined:

"The possibility of its occurring in state of affairs is the form of an object".

While objects do not occur in isolation but only combined within states of affairs (2.0122), all its actual combinations must be a possibility for each: otherwise they could not be actual. The essence or nature of the object is constituted by its possibilities, whether actualised or not:

"Every one of these possibilities must be part of the nature of the object" (2.0123; cf. 2.0111).

Thus to know an object is to know what form it has, i.e., all the possibilities of combinations that must be in the object from the beginning since a new possibility cannot be discovered later (2.0123). This means that the totality of possibilities of an object is a closed one, i.e., a fixed set of possibilities. These determine what kind of an entity the object is and so the states of affairs in which it can enter. This is the object's ontological type.

There is here a limit or restriction that must be seen in connection with the Tractatus commitment to the requirement for the determinacy of sense. The object must have a nature, a set of possibilities determined in advance. The boundaries of this set must be sharp. If a new possibility can be discovered later, the nature of the object will not be a closed one. Hence the states of affairs in which the object can enter will also be open or undetermined. This means we do not know the object 'completely', nor the meaning of the name standing for it. We know neither all the propositions into which the name can enter nor what may follow from a proposition's sense

containing the name. Sense cannot be determinate for the boundaries are not sharp. But propositions must be either true or false, hence its constituents must stand for definite objects which have a definite closed form. A closed system of objects and possibilities is required by the bipolar determinate sense of propositions. Thus, there must be determinate boundaries. These boundaries of objects are the boundaries of the world which are equivalent to the boundaries of logical possibilities, for empirical reality, the world, is limited by the totality of objects (5.5561).

Thus, reality or the world has also a limit, it is a closed reality which is determined by a fixed set of objects containing the possibility of all situations (2.014). This reality, by containing all objects given in the existing state of affairs, contains inherently all possible states of affairs, i.e., all possible worlds. The inherent possibilities of objects are its formal properties or internal properties. As objects occur only in combinations, what they reveal in every combination is that some of their possibilities are realised. These are their material properties:

"For it is only by means of proposition that material properties are represented - only by the configuration of objects that they are produced" (2.0231).

But that those actualities can be produced depend on there being possibilities. That is to say, formal properties or possibilities are logically prior to material properties or actualities. The consequences of this priority will later be considered.

16. (ii) Form as the substance of the world.

"Objects make up the substance of the world. that is why they cannot be composite" (2.021). "Objects are simple" (2.02).

The substance of the world cannot be complex. Simplicity is an ontological requirement as the fixed ground accounting for change, for alterability, for complexity, since only a complex can change. There is change only if

there is something that remains and something that does not. Simplicity is also a logical correlate of the demand that analysis must come to an end. For if ultimate constituents are not reached, complexity is inexplicable. Analysis must end in what is not further analysable (TLP, 2.0201). States of affairs are complex, but their constituents cannot be so.

The 'simple substance' of the world is also its form:

"There must be objects if the world is to have an unalterable form" (2.026).

Objects then are not formless simples, or 'bare simples', but simples with form. A simple having possibilities of combination is not a composite simple, for possibilities are not constituent parts. A further claim is that substance is both "form and content" (2.025). Since objects are the substance of the world they provide the form as well as the content of the world. This is an important distinction, for language can only share with the world its form, i.e., the possibilities of combinations of objects. If language and the world could share both form and content they would be one and the same reality. Content, the materiality of the physical reality of the world, cannot be 'absorbed' by language, only form or formal properties of objects can. (5)

17. At 2.024 it is said that

"substance is what subsists (besteht) independently of what is the case".

For what is the case are states of affairs, i.e., what is complex, what might change and so could always be otherwise. Objects considered as simple and having possibilities of combination inherent in them which can produce complexity must be both independent of whatever is the case and a condition for it. If existence and non-existence apply to what is the case, and hence could always be otherwise, then objects as substance of the world can neither be said to exist nor not to exist; they are beyond existence

and non-existence. They are the realm of what cannot be said but nevertheless makes the sayable possible and in its presupposition. If the substance of the world could be expressed in words, put into words, we could say that it exists and what it is, i.e., we could describe the ontological type of its objects. In this case the function 'x is an object' would be a genuine propositional function. We could substitute x for the object a and 'a is an object' would be a legitimate elementary proposition. But as in Tractarian terms propositions are contingent and express material properties then 'is an object' would be a contingent property of a. But what is intended with 'a is an object' is not to ascribe to 'a' a material property that might not obtain, but rather to establish the entity 'a' as of such-and-such a kind, i.e., as an ontological type. But that must be already established if any proposition about that entity is to be significant. That is to say, the possibilities of combination of an object (the formal properties determine its type) cannot be established by material properties but are rather presupposed by them. So they cannot be expressed, only material properties can. Since what different ontological types there are (e.g., particulars, properties) cannot be said, but is presupposed in anything said, Wittgenstein is not concerned in the Tractatus with the question as to whether objects are particulars or properties. The question need not be discussed here.

18. Objects as the substance of the world or its form constitute what Wittgenstein calls the 'What' of the world, which is contrasted with the 'How'. There are three remarks in which this contrast is made clear. It is worth connecting them in order to see the unity which the Tractatus achieves through them:

3.221
 "Objects can be named. Signs are their representatives.
 I can only speak about them: I cannot put them into words.
 Propositions can only say how things are, not what they are"

'How things are' is the realm of what can be said. It is the actual configurations of objects, of actualised possibilities. What makes this actualisation possible is what things are, both as content and form, for they are inseparable. That only the 'how' of things can be said Wittgenstein repeats in 4.022. But at 5.552 he explicitly makes 'what things are' the precondition and first priority on which logic depends, and so on which sense depends:

"The 'experience' that we need in order to understand logic is not the something or other is the state of things, but that something is: that however, is not an experience. Logic is prior to every experience - that something is so It is prior to the question 'How ?' not prior to the question 'What ?' "

The priority of the question 'what' is the priority of world substance, of form, the precondition of all representation, of all that can be said. It is that which makes sense possible and so too its application to the world. Wittgenstein makes this point in the remark that follows: "if this were not so, how could be apply logic ?" (5.5521). The priority of the question 'what ?' over 'how ?' is a way for formulating the sense-priority thesis, or the thesis that sense does not presuppose truth. Remark 5.552 above has to be seen - as has already been suggested by Rush Rees (1970, p.42) - in connection with 6.44, where Wittgenstein says:

"It is not how things are in the world that is the mystical but that it is". (6)

How things are is the contingent existence proper to objects in combination, i.e., to states of affairs and that is what propositions represent. What things are or that they are cannot be put into words. This is nevertheless the precondition of what can be said, setting its limits. This 'what' of the world, its form, is not beyond the facts as something extraneous to them: what things are and how they are, are two aspects of the world inseparable from each other; one being the precondition of the other.

19. (iii) Form as the precondition of linguistic representation. The first explicit mention of form - or objects with form - being the substance of the world as a precondition for representation (i.e., the possibility of the proposition as picturing independently of truth and falsity) is made in remarks 2.0211-2.0212. That is, these remarks connect the priority of world-form with the priority of sense over truth:

"If the world had no substance, then whether a proposition had sense would depend on whether another proposition was true. In that case we would not sketch out any picture of the world (true or false)".

The remark could be put in a positive mode and be taken to affirm that because the world has a substance then whether a proposition has sense does not depend on whether another proposition is true. That is why we can sketch pictures of the world, either true or false. Also, because a proposition's sense does not depend on the truth of another proposition, we can sketch pictures of the world either-true-or-false. And this is possible because the world has a substance. Hence, the possibility of the proposition being either-true-or-false, i.e., sense being prior and independent from truth, lies in the fact that the world has a substance. Thus, what is put into question if the world has no substance is the very possibility of the pictorial character of the proposition, i.e., the proposition as such, and so language as such.

20. "If the world had no substance" must amount to supposing that the world would be constituted only by what is the case, i.e. facts, actualities, material properties or complexity, without any underlying ground or form or possibilities accounting for those actualities. In this case, obviously, a proposition's sense would have to depend on actual facts, for that is all there is. So a picture, a proposition, would become such only in the actual correlation with an existing fact. So it could

not picture it 'in advance'. In this case either sense and truth would merge, or there would have to be true propositions stating the existence of the objects combined in a fact (if it is assumed that they only occur in combination) to be correlated to the names in the proposition. Of course, the question as to the sense of this proposition, would then arise.

Perhaps, then, "if the world had no substance", and its consequences, should be understood in terms of the features that characterise substance. We have seen that the substance of the world, or the objects constituting the 'what' of the world, may be regarded under three connected features: (i) they are simple, (ii) independent of what is the case, (iii) have form or possibilities of combination inherent in them. So "if the world had no substance" would then amount to saying that if substance were not simple, if substance were not independent of what is the case, and if substance were not form, sense would not be possible. We could not make pictures of the world. Let us see why this would follow, beginning with the question of simplicity, then, moving on to the question of the independence of what is the case and, finally, on to that of form.

21. When Wittgenstein says "whether a proposition has sense" is he referring to an elementary proposition, or to a proposition containing a complex? It is clear that the argument about there being no substance of the world calls into question the possibility of picturing as such, i.e., the possibility of the proposition - whether elementary or complex - being a picture of the world either-true-or-false. Nevertheless a brief consideration of the relationship between the elementary propositions and the complex ones constituted by them will show the manner in which 'substance' must first be seen to be a requirement for elementary propositions to have sense, since these are the propositions at the basis

of language.

22. Wittgenstein says at 3.24:

"A proposition about a complex stands in an internal relation to a proposition about a constituent of the complex" (see also NB,15.5.15).

This means that the truth or falsity of the proposition containing the complex depends on the truth or falsity of the proposition about its constituent(s), for internal relations are truth relations. Wittgenstein adds:

"A complex can be given only by its description, which will be right or wrong. A proposition that mentions a complex will not be nonsensical, if the complex does not exist, but simply false" (Ibid.).

Wittgenstein's views seem to be that the proposition containing the complex name has a sense regardless of whether the complex exists or does not exist. So its sense is not dependent on the truth of the proposition about the complex. But its truth (or falsity) depends on the truth or falsity of the proposition. Naturally, a situation must be reached whereby the truth of the proposition about the constituents does not depend on the truth of any other proposition, but on its 'agreement' or 'disagreement' with an ultimate state of affairs constituted by simple objects. On the assumption that simple objects are not reached, which means that analysis does not come to an end, then no elementary proposition containing simple names would obtain. Hence, in this case, not only the truth but also the sense of the original proposition would be in jeopardy by a non-explanatory endless regress. For the sense of a proposition about a complex is ultimately dependent upon the sense of the elementary propositions of which it is a function (TLP,5). Thus, the argument concerning the dependence of propositions about complexes on propositions about the constituents of the complexes, does not establish that sense is

dependent on truth, it rather establishes that sense (and truth) ultimately require propositions containing simples. These may be taken to be Russell's view as he puts it in the 'Introduction' to the Tractatus:

"The assertion that there is a certain complex reduces to the assertion that its constituents are related in a certain way, which is the assertion of a fact: thus if we give a name to the complex the name only has a meaning in virtue of the truth of a certain proposition, namely the proposition asserting the relatedness of the constituents of the complex. Thus the naming of complexes presupposes propositions, while propositions presuppose the naming of simples" (p.xiii).

Nevertheless this argument tells us little about the nature of elementary propositions, and thus of the nature of simples constituting them. They could be Russellian simples, i.e., 'bare particulars'; but these are not the Tractarian simples. The argument 2.0211-2.0212 must be regarded as invoking substance, or objects, as preconditions of representation not only merely as simples (i.e., not further analysable), but also as simples which are 'independent of what is the case', and possessing 'forms'. Without these two latter characteristics of simple objects, elementary propositions could not be pictures.

Why must simple objects be independent of what is the case for the sense of an elementary proposition not to depend on the truth of another proposition? The semantical motive underlying this ontological doctrine appears to be Wittgenstein's commitment to the thesis that the meaning of a name is its bearer:

"A name means an object. The object is its meaning"
(3.203).

If a name does not have a bearer, it is not really a name, it is meaningless. Consequently, the proposition containing a meaningless name would lack sense. Hence if objects were not independent of what is the case so that existence and non-existence could be applicable to them, then an object could exist at one time, t1, and not exist at another time, t2.

A proposition containing a name existing at t_1 would have sense then, but the same proposition would not have sense at t_2 when the object did no longer exist. In order to ascertain one or the other we would have to rely on the truth or another proposition ascertaining the existence of the referent of the name. The proposition's sense then would be dependent on the truth of a contingent fact about the world. Sense would be dependent on the facts. Sense and so logic, would depend on experience. We could only say something once its existence was ascertained, then logic would have to be prior to the question 'what', having to establish what there is to go on to talk about it. This means, as Wittgenstein has said, that there could be a logic prior to, or without, a world; but how then would it be applicable to the world ?

23. Roger White maintains (1974, pp.14-29) that the argument presented in Tractatus 2.0211-2.0212 is not only connected with the commitment to the thesis that a name contributes to the sense of the proposition by standing for its bearer (TLP, 3.203), but also that it must be seen in conjunction with the bipolar sense of the proposition, taking bipolarity to mean that every proposition divides reality into two, i.e., the possibilities that would make it true and those that would make it false. White's argument is based on the analysis of complex propositions, i.e., propositions containing ordinary proper names such that the possibility of their existence and non-existence does genuinely arise. His views seem to be that even in the case of complex propositions, sense is bipolar so that, it (sense) should not be guaranteed by making it dependent on the truth of another proposition. That is, understanding the proposition 'Martin Luther wrote a commentary on Genesis' involves understanding that is true if Martin Luther wrote such a commentary, and false if he did not.

But if the possibility of the non-existence of Martin Luther is envisaged, as it may be, how does the account of the sense of the proposition cater for this possibility? The possibility of non-existence, i.e., the proposition 'It is conceivable that Martin Luther should never have existed' must be included in its sense, so that the proper name 'Martin Luther' has to be analysed as no longer contributing to the sense of the proposition by standing for its bearer. If this were not the case, for the original proposition to make sense, i.e., to divide possibilities into two groups, a further true proposition would be required, namely, that in fact the history of the world did not go in the way envisaged by the claim 'M. Luther might never have existed' (cf. pp. 19-21). Hence if a complex proposition is to have a bipolar sense independent of the truth of other propositions, the complex proposition must be analysed in such a way that this name no longer contributes to the sense of the proposition by standing for its bearer. Thus there must ultimately be names standing for objects such that it makes no sense to suppose they might not have existed.

24. Some comments seem necessary. The argument establishes that if ordinary proper names, for complex objects, were to be treated as names which contribute to the sense of the proposition by standing for a bearer, then sense does depend on truth, and loses its bipolar character. That is, to deny the bipolarity of complex propositions leads to maintain that sense is dependent on the facts. White's argument about the bipolarity of the proposition, whether complex or elementary, claims that sense cannot be accounted for as being bipolar if it is made dependent on the truth of other propositions. But his argument only shows the way this must be so for complex propositions by invoking the demand for simple objects, i.e.,

objects which cannot be supposed not to have existed, and so for substance as independent of what is the case.

Nevertheless what is important to demonstrate is the fundamental commitment of the Tractatus concerning the claim that 'sense must be independent of the facts', or sense does not depend on truth, in the case of elementary propositions on which all others depend. White's arguments assume this but do not account for it. Hence, attention must be drawn to the fact that for bipolarity to be possible, what is required is not only objects conceived as simples and independent of what is the case, but also objects with forms, i.e., objects possessing inherent possibilities of combination or formal properties. If the bipolar sense of the proposition, or its representative capacity, is to be independent of the facts and yet capable of saying something about the world, there must be something in the world which makes it possible for propositions to have a sense independently of the actual facts, namely, the objects with possibilities. Sense presupposes that what propositions talk about are possibilities of combinations of objects that may contingently obtain or not obtain, but necessary possibilities in so far as they are the formal properties of objects which constitute their nature and are beyond existence or non-existence. What is contingent is their actual occurrence. Wittgenstein said some years after the Tractatus was written:

"What I once called 'objects', simples, were simply what I could refer to without running the risk of their possible non-existence; i.e., that for which there is neither existence nor non-existence, and that means: what we can speak about no matter what may be the case" (PR, 36).

Objects are what we speak about independently of the facts that do obtain in the world. But as talk can only be about facts, i.e., combinations of objects, then we must talk about possible combinations of which, nevertheless, we do not require to know whether they obtain or not. We could not talk about those possibilities if objects did not contain them inherently,

independently of their obtaining, i.e., if there was not a logical priority of formal properties over material properties.

25. (iv) Form as the possibility of structure. The following are the three remarks in which the notion of structure is introduced in the Tractarian ontology:

- 2.032 The determinate way in which objects are connected in states of affairs is the structure of the states of affairs.
- 2.033 Form is the possibility of structure.
- 2.034 The structure of a fact consists of the structures of states of affairs.

Only objects in combination form an articulation, i.e., a structure not a 'mixture'. These articulations are what constitute what is the case, or the actual world. Structure is only proper to states of affairs - or to facts considered a collection of states of affairs. Structure belongs to what is actual, for only actual configurations form a structure. Configurations are contingent, something that may be otherwise. But this actuality, contingency and complexity belonging to structure is only possible through form as the possibility or ground of structure. Form must belong to the non-actual, the realm of possibilities, that which is not contingent but is necessarily so, and that which is not complex and is therefore simple. What is this form? It cannot be other than the form of objects. This form is the possibilities of combinations that the objects have. An actual combination brought about in a state of affairs can only be conceived as a realised or actualised possibility. If there were no such possibility actualisation could not occur. In an actual configuration a possibility is realised producing a material property (2.0231). Thus, material properties are contingent, external to the object; formal properties on the other hand are necessary and internal. Formal properties are the possibility of material properties. The former may be regarded as constituting the realm

of the possible with its characteristic of necessity; the latter as constituting the realm of the actual with its characteristic of contingency. Both constitute what the world is, namely, substance and fact. That is why there is a relation of dependence and independence between form and structure, and between the formal and material.

26. Since objects constitute both the substance of the world and its facts, they have to be viewed under such a double aspect of dependence and independence. Wittgenstein puts it:

"Things are independent in so far as they can occur in all possible situations, but this form of independence is a form of connexion with states of affairs, a form of dependence. (It is impossible for words to appear in two different rôles: by themselves, and in propositions)"(2.0122).

These aspects of dependence and independence are distinct and irreducible to one another, yet inseparable. Independence is clearly connected with possibilities, formal properties; dependence with actualities, material properties. What actually obtains is states of affairs. This view is expressed in a similar way at 2.0231 : "The substance of the world can only determine a form and not material properties". Substance only determines possibilities, and what makes an object the kind of thing it is; it does not determine the states of affairs in which it does enter. 'Independence', therefore refers to the necessary logical connection between what kind an object is and the states of affairs in which it can enter. On the other hand, there is no necessary connection between the object and the states of affairs in which it does enter, which constitutes its 'dependence'. Nevertheless actual combinations by revealing that a possibility has been realised reveal something about possibilities as such.

The semantical reason why objects are both independent of actual states of affairs, i.e., independent of what is the case as regards their

possibilities, yet dependent on the actual combinations because they can only occur combined, is explicitly given by Wittgenstein in this case:

"It is impossible for words to appear in two different rôles: by themselves and in propositions".

27. It is clear what Wittgenstein is denying with this remark: words can mean in isolation. The criterion to determine the meaning of a word in isolation cannot be the same as that determining its meaning in the proposition. The latter requires articulation, combination. The former does not. But if there is no distinction between one and the other, then there could be no reason not to consider the proposition as an aggregate of names, a mixture rather than a structure. There is an extended comment to this effect in the Prototractatus (2.0122) complementing the remark of the Tractatus. What Wittgenstein maintains in 2.0122 is another way of expressing what he says at 3.3 "only in the nexus of a proposition does a name have meaning". Thus the semantical principle of word-nexus is the underlying reason for the principle of the object's dependence and independence.

28. The argument against words meaning in isolation is clearly made against Russell. For him the meaning of the names standing for his objects - simples without forms or bare particulars - is totally given in direct confrontation with them in the act of acquaintance not in combination in propositions. His objects have no formal or internal properties to determine in which combinations they can enter. Hence the combinations in which they do enter are determined from 'outside' so to speak. Structure has no form as its possibility - that is why Russell does not need the distinction form/structure; but that is always why the account of the nature of structure, or the propositional bond

(form understood as the way constituents combine), is so difficult for Russell to give, and why he conceives it as something independent of constituents as some kind of 'entity'. The connection between the object and the states of affairs in which it can enter, in Russell's views, must be contingent for the object has no internal properties. And so there must also be something 'external' that specifies those combinations. Russell's constituents appear to be like 'complete entities' which can combine in a form which must be imposed on them as something external to them. Why this is possible is ultimately unaccounted for by Russell, as we have seen.

29. If Wittgenstein upholds a priority of form over structure, or of formal properties over material properties, or of possibilities over actualities, is this a logical priority and a logical independence? How is this logical priority to be guaranteed and understood in relation to the actual occurrence of objects in states of affairs? The relation of dependence and independence that an object has with states of affairs is reflected in the relation that a name has with the propositions in which it can occur. This relation must be such as to account for the possibility of sense independent of truth-value. So if there is a logical priority of possibilities over actual combinations in the case of objects, this must be the same in the case of names. That Wittgenstein maintains a logical priority and independence of objects over states of affairs seems to be the point of the various remarks that support the claim that to know an object is to know all its formal properties independently of knowing its material properties (2.01231). For to know the objects involves knowing the combinations in which it can enter. At this point we may borrow Guy Stock's words which express this idea very succinctly:

"Knowing the meaning of a name in turn comes to be identical with knowing the possibilities of its combination with other names in the context of propositions and consequently with knowing the possibilities of combination of an object with other objects in states of affairs. Knowing an object cannot require knowing any actualities since knowing an object is already required both in the capacity to know how an object is in fact combined with other objects and also in the capacity to think how the same object might have been combined but in fact is not" (1974, p.72).

In order to know what possibilities are realised and those that might have been realised, all the possibilities must be known. This logical priority, then, is required if a proposition's capacity to be either-true-or-false is independent of what actually exists. For to construct a proposition, which is to construct a situation by way of experiment, amounts to knowing what combinations the names can enter and this is to know their meanings, i.e., all the possibilities themselves.

30. The possibilities, form or formal properties, of an object may be viewed as that which determines the formation-rules of the language, for they determine the permissible combinations in the language. Formal properties as a rule cannot be said in propositions for they are that which makes propositions possible. Only material properties can be said in language. Formal properties are shown in the symbols themselves. So the name-sign is a symbol because it stands for an object as its 'representative'. This means that the name shares with the object the possibilities of combination, i.e., its formal properties. A sign cannot be made a symbol by assigning to it formal properties or by characterising it externally, for only material properties are external. The symbol is a symbol because it goes proxy for an object; this is an internal relation that cannot be said. For this reason formal properties conceived as rules are contained in the symbol. Hence to know the symbol is to know the rules:

"The rules of logical syntax must go without saying, once we know how each individual sign signifies"(3.334).

What a name means, the kind of symbol it is and so the kind of object it stands for cannot be stipulated externally. The rules of combination are internal to the symbols. They follow from a symbol by being a symbol, and so the rules are ultimately grounded in the entities themselves, i.e., objects as form and content. That is why

"When something falls under a formal concept as one of its objects, i.e., something has such and such possibilities of combination this cannot be expressed by means of a proposition. Instead it is shown in the very sign for this object"(4.126).

The sharing of formal properties by a sign and the object it stands for may be regarded as the formal correlation which makes the sign into a symbol. If formal properties were not grounded on the entities themselves, i.e., if rules were not contained in the symbols, then they would have to be stipulated externally: they would make the signs symbols and determine the way symbols signify independently of the entities. Then the correlation between object and sign standing for it would be external and ultimately resting on agreement. This is the line taken by Miss Ishiguro which leads her to deny the central Tractarian thesis that sense must be independent of truth-value.

31. Ishiguro (1969) does not hold the point of view that knowledge of the meaning of the name (i.e., knowing all its possibilities of combination) must have logical priority over the understanding of some particular actual combinations in which the name occurs. She rightly takes the central thesis of the Tractatus for the understanding of names to be 3.3: "Only propositions have sense; only in the nexus of a proposition does a name have meaning", which has been claimed above to be the underlying semantical reason for the dependence and independence of objects which Wittgenstein puts forward at 2.0122. Miss Ishiguro takes

3.3 to mean that we cannot know how a name refers to an object except by understanding the rôle it plays in propositions (p.23), or what might be the same, to come to understand the meaning of a name is equivalent to understanding the sense of the proposition in which it occurs. Both kinds of understanding are inseparable. Her interpretation is based on remark 3.263:

"The meanings of primitive signs can be explained by means of elucidations. Elucidations are propositions that contain the primitive signs. So they can only be understood if the meanings of those signs are already known".

Prima facie the claim that the meaning of the sign must be "already known" appears to support the logical priority of the knowledge of the meaning of names (i.e., all their possibilities of combination). But Ishiguro must take this 'already' to mean - by implication of what she says - something like 'simultaneously', for the meaning of the name cannot be known independently of understanding propositions. She says:

"Identifying the reference of the primitive signs, and understanding the elucidations are not two separate epistemological steps because the identity of the reference of names and the sense of the elucidations are not logically separable" (p.29).

32. This interpretation appears to imply that there is not a prior and independent logical determination based on the possibilities of the object concerning the states of affairs in which the object can enter. On the contrary those possibilities are determined by the combinations in which the object does enter. This means that there must be some basic actual combinations of names which ground other possibilities of combinations. Linguistic possibilities - the rules of formation or formal properties - therefore, are not grounded in the entities themselves, but rather in the actual combinations. So, they are language relative. There must be some actualities known if other possibilities are to be determined. This denies

the thesis of the priority of possibilities over actualities, which, we maintain, pervades the whole of the Tractatus. Necessarily any 'formal' interpretation of the Tractarian objects where possibilities are not grounded in the entities themselves - form and content - but in the actual linguistic combination is committed to have certain true propositions by means of which names and objects are correlated at the basis of language. It denies the central thesis of the Tractatus that sense does not depend on truth. This is one of the conclusions that Miss Ishiguro explicitly draws. She summarises her interpretation of the Tractarian theory of names in the following three theses:

"(i) We settle the identity of the object referred to by a name by coming to understand the sense, i.e., the truth-conditions of the proposition in which the names occur. (ii) Two names refer to the same object if the names are mutually substitutable in all propositions in which they occur without affecting the truth-value of the propositions. (iii) In order to be able to do this and understand the truth-conditions of propositions containing name 'a' or 'b', we have already to agree about the truth (not just the truth-conditions) of a certain sufficiency of propositions in which 'a' and 'b' occur. Thus the identity of the object referred to by a name cannot be settled prior to or independently of the sense of the propositions in which they are used, and agreement about the truth of some of these propositions" (p.34).

33. A further comment on this interpretation may be made. The contention that there must be some true propositions at the basis of language on which the sense of other propositions depend not only denies the very central core

of the Tractatus doctrine that sense does not presuppose truth but also challenges the related thesis concerning the contingency of sense for all propositions as well as that of determinacy of sense. For "agreement about the truth of some of these propositions" would have to determine all possibilities of combination in which the name could enter and so discard all non-permitted combinations in which the names cannot enter. How could a set of propositions guarantee what must be the case about all possibilities ? This would mean that in virtue of some actualities all possibilities are given. But according to Wittgenstein, possibilities are prior to any permitted actualities. So if the totality of possibilities is really what determines the form of an object, the fact that their form is determined by some possibilities which are actualised, would either leave the form undetermined - giving rise to indeterminacy of sense - or would require all possibilities to be actualised, i.e., all true propositions about the name given. Furthermore, concerning the set of propositions whose truth we have to agree upon one could ask: Is not their sense and truth conflated by being gained in one and the same act ? If for a proposition to have sense it must be true, i.e., if there must be agreement about the name's reference (for if the name has no reference the proposition cannot have a sense), then, the sense-truth merger would involve the non-contingency or bipolarity of the sense of the proposition. The proposition could not be either-true-or-false, since the proposition had either to be true or to have no sense. It is clear how actual combinations - structure - lie at the basis of sense in this interpretation, for structural combination is what gives the form of the object. Hence, under this interpretation, Wittgenstein's dictum that form is the possibility of structure would have to be reversed.

III. The Form and Structure of States of Affairs

34. The terms, form and structure, play a central rôle in the ontology of the Tractatus, as well as in the picture theory of elementary propositions which constitute the basis of the logical theory. We have seen that the structure of a state of affairs is the particular way in which objects are related, and the possibility of this structure lies in the form of objects, i.e., their possibilities of concatenations. States of affairs are represented by elementary propositions and like them have form and structure. Elementary propositions are concatenations of names and Wittgenstein says that they are construed as a 'function' of the expressions contained in them (3.318). Nevertheless, function and argument cannot be taken to mean in the same way as the names which combine in a proposition do. Names refer to objects, stand for them; the objects are their meaning. Functions do not refer but rather express something about the formal properties of their arguments.

35. Name expressions are symbols, function and argument expressions are symbols, and propositional variables are symbols; for this reason they are also signs since

"A sign is what can be perceived of a symbol" (3.32).

All concatenations of symbols are structures but while in the case of an elementary proposition (which is a structure or concatenation of names) we cannot assimilate structure and form; in the case of function and argument we can, for this complex symbol, i.e., a structure, expresses formal properties, that is, the possibilities of combination of its arguments. Propositional variables by being the expression of formal concepts are also structures which express formal properties (4.127, 4.1271). So form/

structure in these cases may be used interchangeably. But still, the possibility of these logical symbols lies in the basic distinction at the level of the elementary propositions and states of affairs in which structure cannot be used interchangeably with form. Ultimately the use of 'form' or 'formal' in logical theory depends on the form of objects and so on the theory of the elementary proposition.

This makes clear why, in the case of Russell, form and structure are equivalent terms: his usage of these terms is always in connection with propositional variables where structure does show a form - possibilities of combination . With this usage Wittgenstein would agree and have no qualms here in interchanging form and structure, but not in the account of elementary propositions. So it is at the level of the elementary proposition that the non-identification of form and structure is crucial, and it is here that the main difference between Russell and Wittgenstein is to be found. This difference between Russell and Wittgenstein we shall further clarify presently by considering in more detail Wittgenstein's views on the distinction form/structure. Some views of those commentators who have paid attention to the distinction shall be of valuable help here.

36. F.P. Ramsey in his review of the Tractatus realises that Wittgenstein must be making a point when distinguishing between form and structure of states of affairs, and so of the elementary propositions that picture them or represent them. B.F. McGuinness follows Ramsey in his interpretation of the distinction of his paper 'Pictures and Form in Wittgenstein's Tractatus'. J. Griffin in his Wittgenstein's Logical Atomism challenges their views. It will be shown here why the Ramsey-McGuinness interpretation seems to be the correct one in one respect, and why Griffin's is also correct in another respect, so that both accounts complement each other and are not

antagonistic. We shall follow Griffin's arguments as he presents them in his book (p.72 ff, and 93-95).

37. Griffin wants to maintain that if structure is simply configuration of objects, as the 2.03's indicate, then different states of affairs with different objects can have their configuration in common, i.e., their structure in common. This is what is denied by Ramsey-McGuinness. Ramsey says that

"It looks as if two atomic facts might well have the same structure, because objects hang together in the same way in each of them. But it seems from remarks later in the book that the structure of the fact is not merely the way in which the objects hang together but depends also on what objects they are, so that two different facts never have the same structure" (1931, p.271-2).

McGuinness says that the remarks that show this are 4.1211, 5.13, 4.2, 5.22. This is the way the argument goes: Wittgenstein says that we can recognise when a proposition follows from another (5.13) or when propositions stand in internal relations to one another (5.2, 5.22) just from their structure alone (4.1211). To recognise that two propositions are contradictory we must know that they are 'aRb' and '¬aRb'. It is not enough to know that they are '()R()' and '¬()R()' because then it would be possible for 'p' to be the contradictory of '¬q'. So the structure of propositions must involve names and the structure of states of affairs, objects. This means that a structure is equivalent to a state of affairs and vice versa, and that to assert the existence of a structure is to assert the existence of a state of affairs. The interpretation that form is the possibility of structure would amount to this: the structure of the state of affairs aRb is of the following forms, 'xRy', 'φ(x,y)', 'this is how things stand'.

38. Griffin rejects these views on the following grounds: It is true that in order to know whether two propositions contradict each other

we have to know more than ' $()R()$ ' and ' $\sim()R()$ '. Nevertheless we do not need to know particular names filling the brackets, but only, given a set of names, how they are distributed in the brackets. This is given in the propositional functions ' xRy ' and ' $\sim xRy$ '. Hence, Griffin concludes, the later passages on structure that are invoked by McGuinness, do not substantiate the claim that structure involves names. Rather these passages make the point that logical internal relations (truth relations) involved in inference, contradiction, etc., do not depend on the material content of propositions. Griffin's conclusions seem to be correct. Nevertheless Griffin's and also McGuinness' arguments rely on the identification of the notion of structure as it occurs in the 2's in reference to state of affairs and to elementary propositions that represent them, with the notion of structure that occurs in the later remarks concerning the logical internal relations. This identification of the two distinct meanings and functions of structure does not seem to be correct for the reason that follows.

39. Structure understood as the determinate relation in which objects constitute a state of affairs, brings about material properties. There could not be material properties unless there are objects in concatenation and so related in a determinate way, i.e., having a structure. The elementary proposition that represents a state of affairs, expresses a material property and it is in virtue of that property holding or not in reality that the proposition is either-true-or-false. Hence a structure, in elementary propositions which picture, must involve names. Picturing is possible only if such material properties are produced; whether they obtain or not in reality is something external to the proposition which makes it true or false. The truth of elementary propositions is external to them.

The next question is what makes possible this 'production' of material properties. Here Wittgenstein's answer is clearly : form. For form is the possibility of structure. Form has to be understood ultimately as referring to the form of objects, i.e., the formal properties of objects (or of propositional elements) that make such and such particular combinations - material properties - possible.

Now, structure as it is meant in the logical theory can be taken as a 'logical structure' in the strict sense of the term involving logical symbols whose meaning has to do with formal properties only. Logical structures in this sense, (i.e. any propositional variable or function) do not express any material properties, they are wholly expressions of formal properties. Truth and falsity here (or what is the same, the logical internal relations within propositions, which can only be brought about by the logical operations) is an internal truth or falsity which depends on the symbols alone, i.e., on their structural combinations alone. That is why, as Griffin argues, in these cases structure does not involve names. It only involves such general forms of names as the propositional variables exhibit. For this reason it might very well be contended that logical structures are forms in a very strict sense. While in the case of elementary propositions this cannot be so. For in that case structure is a combination of symbols that refer to particular objects in a determinate combination and involves both material properties and the inherent formal properties as their possibility. Hence, a proposition has a form in the sense that it is itself an argument of a propositional variable, but it is not itself a form in the sense that the variable is. Logic in its logical structures - logical propositions - mirrors the form of the world, i.e., exhibits its formal properties which make possible what can be said: the material properties.

40. There is another argument that Griffin puts forward against the view that structure involves names, and which appears not to be correct. He says that in order to "determine the form of the structure aRb " constant elements must be successively removed. If the state of affairs is composed of the objects a and b then it could be pictured by something like '() ϕ ' a form that can be expressed as 'two objects in some relation to one another' or ' $\phi(x,y)$ '. Griffin concludes that if this is the case

"Wittgenstein's claim that picture and fact must have pictorial form in common would be nothing more than the claim...that picture and facts has the same numerical multiplicity"(p.75).

That numerical multiplicity is a necessary requirement of isomorphic representation of fact by proposition, is explicitly stated by Wittgenstein in 4.04. But naturally this is not the only requirement according to him. The structure, constituting both the picture and what is pictured, and the correlations between them are also required. But 'form', the sharing of possibility of structure, is the first necessary and most fundamental requirement of representation on which all others depend. So, there are two points to be noted in what Griffin says about numerical multiplicity. On the one hand precisely because it is true that 'two objects are in some relation to one another' does not specify the determinate relation in which they stand, i.e., the material property, structure must involve names in propositions that picture. On the other hand, it is not accurate to claim that if proposition and fact share their form, expressed as ' $\phi(x,y)$ ', this sharing can be accounted for simply in terms of numerical multiplicity. This inaccuracy seems to be supported by an assumption that Griffin and other commentators share, and which renders this interpretation of Wittgenstein questionable. Let us consider in what this assumption consists.

41. Griffin says that all facts are 'objects in a determinate relationship'

"so all that we need demand of one fact for it to picture another is that it contains the same number of objects" (p.75),

thus numerical multiplicity is equivalent of identity of logical form.

Why is this not so ?

Numerical multiplicity by itself does not constitute a fact but an aggregate, or a 'mixture' not a 'structure'. And according to Wittgenstein when a fact (a proposition) represents another fact (a state of affairs) the proposition cannot first be considered a fact in its own right and therefore having a structure on its own, which permits it to be correlated to another structure. In this case the structures of the two facts would be independent of one another, and why one is capable of fitting the other is left unexplained. This is precisely what the picture theory attempts to account for. (Some ideas on how the proposition represents must be advanced now which will be substantiated later on). A proposition can only be a fact, and so have a structure, when it already shares the form of what it represents. This is the whole point of picturing and projecting. What makes a proposition a fact that can represent is its symbolic character. Then the proposition is not first a fact which is then made a symbol. The elements of the propositional sign are scratches without structure or form unless they are part of the proposition. So numerical multiplicity cannot be equivalent to logical form since form by definition is the possibility of structure. This possibility comes from the objects, which are of such and such form, so that the form of the state of affairs is the amalgam of the form of objects constituting it. Thus different states of affairs could have the same form while having different structure, i.e., expressing different external properties. Naturally in the case of objects being of the same

form, it could also happen that they could produce similar structures, i.e., similar material properties.

42. To sum up: structure in the elementary proposition is a requirement to account for the sense of the proposition as a picture of a state of affairs which produces a material property. In this case structure involves objects which have forms and so makes this particular structure possible. In the case of logical propositions structure does not involve objects, for those propositions are only concerned with exhibiting formal properties. The form/structure distinction in the elementary proposition is vital in the account of the manner it pictures and so in the manner it is related to reality. Consequently it is important to logic which is founded on elementary empirical propositions with sense. Structure in elementary propositions is concerned with external properties: logical structure, or the structure of logical propositions is concerned with formal properties. In both cases structure is a combination of symbols. But as in each case the way the symbols signify is different, structure too has a different sense and function. That is, in both cases structure is closely connected with the question of truth. But while the truth of elementary propositions cannot be ascertained from the structure alone (or from the symbol alone) in logical propositions it can. That is the difference between the two. In the first case we are dealing with material properties, while in the second we are dealing with formal properties.

43. The structure of facts. We saw above that Wittgenstein applies 'structure' not only to states of affairs but also to facts (Tatsache). At 2.034 it is said:

"The structure of a fact consists of the structures of states of affairs".

If a 'Tatsache' is understood as the existence of states of affairs (TLP,2;2.06) can it be said to have a structure? Can 'the fact that something exists' have a structure? Wittgenstein appears to maintain as regards facts that only combinations of objects produce structure. Therefore structure would seem to be applicable to existing combinations of objects rather than to the existence (intentionally understood) of such combination. The question as to whether it is one or the other depends upon the interpretation that 'Tatsache' and 'Sachverhalt' may receive. Let us then examine the usage of these notions in the Tractarian ontology.

44. The meanings of the terms 'Tatsache' and 'Sachverhalt' as they occur in the Tractatus were explicitly characterised and contrasted by Wittgenstein in a letter to Russell in 1919. This explanation has been widely ignored, and those who have not ignored it do not seem to have taken into consideration the point it is trying to make; this is true of Russell himself and Stenius among others. The contention here is that Wittgenstein's explanation of the terms in the letter does not only accord with the rôle the terms play in the Tractatus, but that it is precisely their best characterisation, as was to be expected. E. Stenius says concerning these terms in his Wittgenstein's Tractatus (1960,p.29):

"Though Russell's formulation is founded on an explanation given in a letter by Wittgenstein himself, this is not the way in which the two concepts are in reality related to one another in the Tractatus".

Stenius concludes that

"a Sachverhalt is something that could possibly be the case, a Tatsache something that is really the case" (p.31).

This conclusion has already been shown to be inadequate, (e.g., M. Black 1964, p.40ff; J.Bogen 1972,p.27) but it may be added that Stenius is also wrong

in claiming that Russell's interpretation follows that of Wittgenstein's explanation of the terms in the letter.

45. Wittgenstein's description of the terms. After having read Wittgenstein's 'Abhandlung' for the first time, Russell wrote to Wittgenstein and, among other things, asked him: "What is the differences between Tatsache and Sachverhalt ?"^(°) To this Wittgenstein replied:

"Sachverhalt is, what corresponds to an Elementarsatz if it is true. Tatsache is what corresponds to the logical product of elementary propositions when this product is true. The reason why I introduce Tatsache before Sachverhalt would want a long explanation" (LR, p.72).

Let us assume that the symbol '=' stands for 'to correspond' then, in accordance with the above explanation, we have:

- (i) Sachverhalt = Elementarsatz (if true)
- (ii) Tatsache = Conjunction of Elementarsaetze (if true)

If we now substitute in (ii) Elementarsatz by Sachverhalt we have:

- (iii) Tatsache = Conjunction of Sachverhalte.

Thus, in the English version (Pears - McGuinness) a fact is characterised as a conjunction of states of affairs. Now, as states of affairs is an ontological category, it is not really adequate to apply to it the logical term 'conjunction'. States of affairs are independent of each other. The elementary proposition that corresponds to a Sachverhalt is also independent. Nevertheless propositions can be brought into relation with one another in virtue of their truth or falsity. Although there are no causal relations among the Sachverhalte that the elementary propositions represent, there are truth or logical relations among the propositions themselves. A group of such propositions in conjunction (when true) state that the corresponding group of Sachverhalte obtain in the world, each being causally independent of others. Conjunction as a purely

(°) The terms 'Tatsache' and 'Sachverhalt' will not be italicised in these pages for the sake of convenience.

logical category cannot be applied to a collection of states of affairs in the strict sense, for the very weighty reason which Wittgenstein describes as his "Grundgedanke":

"My fundamental idea is that the 'logical constants' are not representatives; that there can be no representatives of the logic of facts" (TLP, 4.0312; see NB, 25.12.14).

Conjunction is a logical constant and therefore it cannot have any representative or proxy in the ontological realm. Thus, let us call a Tatsache "what corresponds to a logical product of elementary propositions when this product is true", a collection of Sachverhalte. It becomes clear that from a strict ontological point of view Tatsache, under the present characterisation, does not have any other ontological status above or different from the individual Sachverhalte. The individual existing Sachverhalte are what make either elementary or compound conjunctive propositions true. Thus, what is the case, what occurs, what obtains in the actual world, the Tatsache, are Sachverhalte. These, the Sachverhalte, are the ultimate ontological complex category which applies to the actual world as that which is the case. In other words, what exists is only Sachverhalte, and these are called by Wittgenstein the facts. It is clear that Wittgenstein's explanation of the terms as given in the letter conflicts with views such as those of Stenius, who considers a Sachverhalte only as what is possibly the case. It must be admitted at least that a Sachverhalt may be actual and possible. For a Sachverhalt is what corresponds to an elementary proposition when this is true, and a Tatsache to a conjunction of elementary propositions when this is true. Without denying that Sachverhalt and Tatsache may be possible, let us consider Wittgenstein's characterisation of them as actual in order to see the point he may be trying to make. In Tractarian terms to say that a proposition is true is to say that the corresponding situation in the

world obtains, is the case. Wittgenstein says that Sachverhalte and Tatsache make propositions true. But it is obvious that the manner in which the elementary proposition gets its truth is different from the manner in which the conjunction does. The second is a truth function of the first and, therefore, the individual propositions are those compared with reality, not the conjunction as such. Thus, although both Tatsache and Sachverhalte make propositions true, we are not to identify them both in such a way as to make them 'facts' in the same respect, and so to commit a category mistake. What obtains in the world, whether considered in isolation or in collection, are Sachverhalte. That is why 'fact' has a different meaning when applied to Tatsache and when applied to Sachverhalt. Tatsache do not exist but rather refer to the existing Sachverhalte.

46. The point of the distinction; If Wittgenstein characterises Sachverhalte as existent or non-existent, why then does he require the concept of Tatsache? Is it not a mere synonym of 'existent' Sachverhalt and so something of which we could dispose? Could not the Tractarian ontology do without it? What is its rôle and how far is it necessary? I think the letter gives us the clue by characterising Tatsache as a collection of Sachverhalte. This is the meaning the term has in the Tractarian ontology, which is further substantiated by the rôle it plays there. Let us now consider Russell's interpretation of the term to see how it differs from Wittgenstein's.

47. Russell in the 'Introduction' says that "facts are what make propositions true"; with this Wittgenstein would agree. But it is not in the Wittgensteinian spirit to equate Sachverhalt and Tatsache under the same heading 'fact', as Russell does. If a conjunction, i.e., a molecular

proposition in Russell's terminology, is defined as something which can be true or false and whose components are elementary propositions, then by definition following the criterion of complexity, there cannot be a limiting case in which an elementary proposition can be molecular. Nevertheless, they are both called propositions in reference to truth and falsity. But this only shows that they are different kinds of propositions because their actual obtaining of truth and falsity is different. Thus, since Sachverhalt and Tatsache are distinguished in reference to the propositions which they make true, then we must conclude that if Tatsache is defined as a collection of Sachverhalte there cannot be a limiting case in which Tatsache is a Sachverhalt. Only because they make propositions true can one call them 'facts', as Russell does. But by doing so a Sachverhalt is seen as a species of a Tatsache and the fundamental difference between the terms and their function is blurred. The following is the way Russell puts the matter, which contrary to Stenius's opinion, fails to express Wittgenstein's views:

"Facts may contain parts which are facts or may contain no such parts; for example: 'Socrates was a wise Athenian', consists of the two facts, 'Socrates was wise', and 'Socrates was an Athenian'. A fact which has no parts that are facts is called by Mr. Wittgenstein a Sachverhalt. This is the same thing that he calls an atomic fact"(p.xiii).

Some paragraphs earlier, Russell had also said:

"Socrates is wise" is a Sachverhalte, as well as a Tatsache, whereas 'Socrates is wise and Plato is his pupil' is a Tatsache but not a Sachverhalt"(p.xi).

To say that 'Socrates is wise' is both a Sachverhalt and a Tatsache is something that Wittgenstein does not deny, but it is also something that he does not affirm in his ontology. His explanation of Tatsache as a collection of Sachverhalte seems to point to something different. In the Tractatus Wittgenstein is consistent in equating Tatsache in singular with

Sachverhalte in plural. This cannot be a mere coincidence, but something explicitly intended, as his letter shows.

48. Making a Sachverhalt a species of Tatsache, i.e., saying that in a limiting case a Sachverhalt is a Tatsache as Russel does, has led commentators to certain unclarities concerning complexity and existence as regards Tatsache, missing what may be considered to be the point of Wittgenstein's explanation of the term as a collection of Sachverhalte. Let us deal with complexity first. For example G.H. Parkinson (1976,p.13) says:

"We have seen that a fact is a set of states of affairs, and that (2.01) a state of affairs is a combination of objects. It follows that facts, too, are combinations of objects".

This is misleading for it makes applicable to facts, in the limiting case, what would be applicable to states of affairs. This is really not valid and if done a 'category mistake' would be made. Facts are never said to be combinations of objects by Wittgenstein. The complexity of a fact is that of a collection of Sachverhalte. Only in the case of a Sachverhalt being a Tatsache would we be entitled to say that a fact is composed of objects as Parkinson seems to do. But this is misleading. That Wittgenstein in the Tractatus does not conceive a fact as complex of objects has already been argued by A. Kenny (1974) but remark 2.01201 in the Prototractatus may serve as complementary evidence to substantiate this:

"Wenn die Dinge in Tatsachen vorkommen können, so muss dies schon in ihnen liegen".

This corresponds to Tractatus 2.0121b that says:

"Wenn die Dinge in Sachverhalten vorkommen können so muss dies schon in ihnen liegen" (my emphasis).

The change from Tatsache to Sachverhalt appears to indicate Wittgenstein's

views about Tatsache not being a complex of objects. This kind of complexity is what a Sachverhalt has.

49. There is a further argument brought by Kenny to support that facts are not to be understood as a complex of objects: it is based on the characterisation that a Tatsache has in the Tractatus in connection with existence.

"...in the Tractatus, too, the fact that links were concatenated (whether literal links in a literal chain, or objects in states of affairs) would be a fact, the existence of a Sachverhalt, and that would not be composed of anything". (1974, p.11).

If I understand Kenny correctly he takes a fact to refer primarily to the 'existence' of a Sachverhalt rather than to 'existent states of affairs' or states of affairs which obtain as a collection. While it is not possible to maintain that Wittgenstein would have denied the characterisation of a Tatsache as the existence of a Sachverhalt, this does not appear to be the central meaning of the term in the Tractarian ontology. And if this were the only meaning of Tatsache - as we said before - how could 'existence' have structure? Why then is the term Tatsache required, and why cannot the ontological theory dispense with it? Again, as the letter suggests, it is the logico-linguistic requirements that determine the ontological ones. The Tractarian ontology can only be understood in the light of its semantics. The term Tatsache is required in the ontology because, in the Tractarian view, to speak of the truth of a proposition is to speak of the correspondence with something which makes it true. Thus, in order to speak of the truth (or falsity) of a compound proposition we have to speak of a 'unity' - a something which makes it true. This something could not be accounted for by individual Sachverhalte unless seen as a collection and represented as a conjunction. And this is what language does by means of the logical constants. Language has not only the capacity of representing an individual

Sachverhalt, picking it up so to speak or projecting it by an elementary proposition; it can also pick up a number of Sachverhalte and make them into a unity represented by a conjunctive proposition which means bringing them into truth relations. If a compound proposition is true, it has unity and independence (relative to the interdefinability of the logical constants)⁽⁷⁾ and so something which makes it true: a Tatsache. But this means that a compound proposition is a truth-function of its constituent elementary propositions when they are brought into the truth-relation of conjunction. But the world only contains the existing states of affairs which correspond to the elementary propositions. There is nothing in the world apart from these. Nevertheless the concept Tatsache is necessary because without it the world could not be spoken of or mirrored by language. The possibilities of the world and its actual occurrences cannot be represented unless propositions are brought into logical relations. It is inconceivable to have a language with only elementary propositions in isolation not bearing relations to one another. They, in isolation, would not be capable of picturing the world which, indeed, has only independent states of affairs. It is precisely in the nature of the elementary proposition that the possibility for logical relations lies. Thus, as elementary propositions are presupposed and required by a conjunction, so Sachverhalte are presupposed and required by Tatsache which is a collection of them.

50. This makes it possible to envisage an indefinite conjunction of all the true elementary propositions of language as a description of the world,

"The totality of true thoughts is a picture of the world"
(3.01).

Therefore, it is possible to conceive the world as the totality of all existing Sachverhalte and so, as a Tatsache, which would make true the

long linguistic conjunction. It seems no accident to me that Wittgenstein says in remark 2:

"Was der Fall ist, die Tatsache, ist das Bestehen von Sachverhalten"

In remarking Wittgenstein has equated "Was der Fall ist" with the world and at 1.1. the world with the totality of Tatsache, but now at 2 "Was der Fall ist" is "die Tatsache" (and not "ein Tatsache"). 'Die Tatsache' may encompass all collections of existing Sachverhalte, and so, the world. Pears-McGuinness have translated remark 2 as "What is the case - a fact - is the existence of state of affairs". Under the present interpretation rendering 'the fact' "die Tatsache" could respond more to Wittgenstein's intentions - that was Ogden's rendering in 1922 to which Wittgenstein did not object - for 'the fact' could be regarded as the totality of existent Sachverhalte, i.e., the world. There are various remarks in the Tractatus in which it is explicitly said that a Tatsache corresponds to a collection of Sachverhalte. The clearest, perhaps is the one just commented on, but also we may recall 2.034 as an explicit statement of it. Remark 4.2211 says:

"Even if the world is infinitely complex, so that every fact consists of infinitely many states of affairs and every state of affairs is composed of infinitely many objects, there would still have to be objects and states of affairs".

51. We may recall that Wittgenstein in his letter to Russell says "The reason why I introduce Tatsache before Sachverhalt would want a long explanation". Part at least of this long explanation is what we are trying to convey: the world, as that which we speak about, cannot be conceived or spoken of unless propositions bear internal (truth -) relations to one another which the logical constants express. Without these internal relations we cannot have the truth about the world, or the possibilities

of states of affairs holding or not holding. Only states of affairs as collections give us such a picture. Thus, by introducing the world as that which is the case first, (for that is what language is about), Tatsache have to be introduced before Sachverhalte, and these before objects. That is to say, the introduction of Tatsache before Sachverhalt makes a logico-linguistic point. Tatsache is an ontological category which makes possible the relation between the theory of truth of elementary propositions and the theory of truth of molecular propositions. For at the basis of language lie elementary propositions as pictures of Sachverhalte, but this basis supports the compound truth - functional propositions which correspond to Tatsache.

52. Other uses of "Tatsache". This term is not only an ontological category in the Tractatus, as said earlier, but also a linguistic one which cannot be equated with 'a collection of Sachverhalte' and which stands for something singular, namely, a picture or what it pictures. Tatsache is central to Wittgenstein's conception of language as representation. We are told that "A picture is a fact" (2.141; 2.16), that "A logical picture of facts is a thought" (3), so that a thought is also a fact (LR, p. 72), "a propositional sign is a fact" (3.143), etc., the fundamental reason being that "Only facts can express a sense, a set of names cannot" (3.142). The point of these remarks in the 2's and 3's is not primarily an ontological one connected with something existent which makes something else true, and so with the theory of truth. It is rather a semantical one connected with articulation or structural complexity, and so with the conditions for something to express a sense, or picture. Thus, facts are not only what is pictured (ontological facts) but what pictures (linguistic facts). Naturally, linguistic facts,

insofar as they are 'linguistic', that is to say, insofar as they are picturing facts or intentional facts, differ from Sachverhalte understood as physical facts, in that their existence depends on their relation to Sachverhalte. Physical facts or Sachverhalte do not require such a relation for their existence. Nevertheless, linguistic facts represent Sachverhalte precisely because they themselves are facts. In other words, linguistic facts represent Sachverhalte and this representation requires certain common characteristics in both kinds of facts. One of them is articulation or structure. Linguistic facts obtain, occur in language, are actual in language, though not necessarily so in the world: "sense is independent of the facts" (4.061). There are still other usages of Tatsache in the Tractatus which appear not to have any directly intended technical meaning in either the ontology or the theory of proposition.

53. Wittgenstein's attempt to build philosophy upon the necessary features of language makes the essence of the world - as the main philosophical concern of his early philosophy - relative and dependent upon the essence of language. For this reason the Tractarian semantics cannot simply be said to yield a metaphysics as a by-product. It is rather a deliberate attempt to make semantics the underlying motivation and justification of the Tractarian ontology. We have tried to point out how this may be seen to hold for each of the different claims and ontological commitments we have touched upon. Our central contention though, applies more generally to the distinction between form and structure, and the priority of form over structure - that runs throughout the Tractarian ontology - as a requirement of the semantical thesis that sense does not presuppose truth, and indeed has a priority over truth. This thesis determines the conditions and manner in which a proposition is related to reality, and to the manner in which the isomorphic correspondence between language and the world has to be understood. It is this that we intend to consider in the next section.

III. The Proposition's Relation to Reality

54. The way in which a proposition represents reality and its relation to it is accounted for in the Tractatus by the comparison of propositions with pictures. We shall now consider the rôle that form, and consequently structure, play as regards:

- (i) The proposition being a picture in its own right.
- (ii) The proposition being a picture that represents independently of its truth and falsity.
- (iii) The proposition's internal relation to reality (see above p.135).

Let us consider these in turn.

55. (i) The proposition as a picture. The elementary proposition that represents a state of affairs has, like the state of affairs, structure and form. This is what enables the proposition to represent, to be a picture, a logical picture. Also, as in states of affairs, so in a picture its form is the possibility of structure. Wittgenstein puts it this way:

2.15

"The fact that the elements of a picture are related to one another in a determinate way represents that things are related to one another in the same way. Let us call this connexion of its elements the structure of the picture, and let us call the possibility of this structure the pictorial form of the picture".

Thus the pictorial form of the picture is what makes structure possible. It is what makes it into a fact, an articulation that can represent how things outside are related. Only because a picture has a structure or is a fact (2.141) can it represent for "Only facts can express a sense, a set of names cannot" (3.142). What does it mean to say that a picture is a fact in its own right? Are the forms of its elements, as in the case of states of affairs, the possibility of its structure? In what does the form of its elements consist?

56. Concerning the ordinary sense of 'picture' a distinction can be made between making sense of a 'picture' in its own right and as a "picture of...". By this is meant that in the first case the representation does not need any particular reference to a particular state of affairs or things, its own elements and their arrangement make the representation into an intelligible picture. By looking at it we know it is a picture. If a picture, on the other hand, is a picture of something external to it which exists or has existed, as say, in the case of a portrait, more information is required to recognise it as such a portrait than knowing it to be a picture. What makes it into a portrait is that the elements and their relationship is determined and dependent upon the object of the state of affairs which it represents. It is clear that a picture of something, in this case of ordinary pictures, can be also recognised as a picture independently of being, say, a portrait. It is a picture in its own right. This means that its structure must be regarded as independent and not determined by any external state of affairs.

57. Propositions as pictures are always pictures of something external to them, they are not self-referring. Thus, it is a feature that characteristically belongs to them that they can be recognised as pictures in their own right only in so far as they are recognised as pictures of something external to them. Thus, recognition of what a proposition represents which is external to it and recognition of the picture as such are not independent. For only if there is a 'picture of something' is there a picture at all, not the other way about. A proposition is not first a picture, or a fact in its own right and then, because of this, made capable of being a picture of something. If this were the case then the original fact - which would then become a picture - would derive

its picturing capacity from its own structure as a non-picturing fact (and so from its constituent elements having a form making this structure possible). The structure and form of the non-picturing fact would be independent of the structure and form of the state of affairs which it could represent. Picturing, then, would have to be conceived as an external correlation of the two independent facts. This externality is what Wittgenstein denies .

Nevertheless, it may be argued, the elements of a picture must have a structure insofar as the picture must be constituted by physical constituents and so be a Sachverhalt in its own right. This cannot be denied, but it can be misleading. A physical fact constituted by scratches on paper or a set of sounds can be made into a linguistic fact. What makes this capacity possible ? It must be the forms as the possibility of structure or articulation which the physical constituents possess. But what kind of structure must that fact have, or to put it another way, what kind of a fact must it be in order to become representational ? Physical elements can be regarded as being structured in many different ways. They do not just constitute a 'single fact'. For example, two scratches on paper which appear to be similar to some kind of written linguistic signs can be taken to be a fact. But what kind of fact ? A variety of 'facts' could be selected from them, e.g., that one sign is to the left of the other, that one is larger than the other, that one has a colour different from the other, etc.. Thus, a selection has to be made in order to pick up the relevant fact that can become representational. But it is only in virtue of a correlation with a linguistic fact that such a selection can be made. Then the very correlation that we want to explain is presupposed, for such correlation cannot be made unless we know the language. If such a correlation is presupposed then the form of the represented fact is already shared by the fact which can represent it. This sharing cannot occur

independently of the correlation between the two facts. There cannot be an independence of form and structure in a fact which can be linguistic prior to that possibility. If there is such an independence, then, the elements of the two facts must be externally correlated and made to represent something in an external manner; as Miss Anscombe puts it: "only if significant relations hold among the elements of the picture can they be correlated with objects outside so as to stand for them" (1959,p.68). Let us further consider why this cannot be the case.

58. The Tractatus has said that "a propositional sign is a fact" (3.143) - not that a proposition is a fact, rather "a proposition is a propositional sign in its projective relation to the world"(3.12) -. If a propositional sign is a fact, its elements must be arranged in a particular manner, i.e., it must have a structure and its elements form, to make it possible. These elements, in the propositional sign, are only signs, i.e., name-expressions. But signs cannot strictly be said to be arranged to constitute a picturing fact unless they have forms, and this means they must be symbols, i.e., represent something outside them. Name-signs in themselves without being symbols, are scratches, physical marks which would constitute mere aggregates - a mixture not a structure - as Wittgenstein says. That is, signs can be arranged in various combinations that can represent something, if they stand for something, mean or refer to something. Signs do not refer to themselves "what is signified is not its own sign"(NB,19.10.14). That is, name-signs when they are symbols (i.e., when they stand for things external to them) make facts which represent.

59. A name-sign is a symbol if it stands for an object (3.203), if it has meaning. If it is representative (3.22) then it shares the

possibilities of combination with the object it stands for, as 2.151 above implies. The name, then, has to "take on" (J. Griffin's expression) the form of the object to become its representative. This idea was expressed in the Notebooks as follows:

"The possibility of the proposition is, of course, founded on the principle of signs as GOING PROXY for objects" (NB, 25.12.14).

(This is repeated in Tractatus 4.0312).

"Then in order for a proposition to present a situation it is only necessary for its components parts to represent those of the situation and for the former to stand in connexion that is possible for the latter" (NB, 5.11.14).

The possibilities of combination is what must be shared by names and the objects they stand for. This sharing is what makes names symbols. This sharing is the form that makes structure possible, and if the form of what represents is the same as what is represented, their structure can be the same. But these structures are a consequence of the form already shared, and so of the names already having a meaning, already being correlated. This, therefore, contradicts Miss Anscombe's view of the matter (see above p.133)

60. When Wittgenstein tells us that 'this ink pot is on the table' could represent the fact that 'I am sitting on this chair' (NL, p.98) he attempts to make clear that only a combination of things can represent a combination of things, or only facts represent facts. In Tractarian terms this analogy applied to propositions is illuminating, insofar as it makes clear that numerical multiplicity and arrangement or structure (and so the form of its elements) are necessary conditions for a fact to represent another fact. Nevertheless within this same Tractarian outlook the analogy breaks down when we see that the correlation there is between the facts 'the ink pot is on the table' and 'I am sitting on the chair' (two physical facts) is not the same as the correlation between the proposition

as an intentional or picturing fact and the physical fact. In the former case both are facts in their own right, with independent form and structure, or, as Anscombe says, with significant relations holding among the elements prior to their correlation. Because both facts have entities and a structure, the correlation can be made so that one fact represents the other. Since this correlation depends on a structure already existing, it may be characterised as the structural correlation. This, according to Miss Anscombe, we may recall, is "external" and is what makes a fact represent another. So it is by means of the structural correlation that representation is achieved.

61. But if a propositional sign is a fact with a structure and is not a mere aggregate, this structure is conferred on it by the form of its elements, i.e., by its elements being symbols. So signs must be symbols if they are to constitute any particular structure, for their being symbols, i.e., their having form, is what makes structure possible. That 'form is the possibility of structure' holds for all facts, if they are to be facts and not aggregates. That is, a propositional sign is a fact - has a structure only when considered as a proposition. For it is only then that its elements are "representatives" and so contain the form that they have "absorbed" (cf. D.F. Pears, 1977) - in being symbols - from the objects they stand for. The possibility of representing facts - structure - lies in having the same form as the elements of the ontological facts they represent. And if they share the form they share possibilities of combination and so they both can have the same structure by means of which they represent. But a proposition has only a structure in relation to the fact it represents, not independently of it. Here there cannot be an 'external' correlation between the elements of the fact that represents

and the things they stand for. The correlation of elements - the fact that they share form - is a presupposition for the linguistic fact to be possible. Strictly speaking a propositional sign, if considered independently or detached from its application (or proposition), only contains 'numerical multiplicity' of elements, but these cannot have a structure unless they are symbols. The proposition - or linguistic fact - does not possess a form and structure independently from the elements of the facts they represent. For this reason it may be contended that only language can represent reality, not the other way round. For language depends on the world for its form. Language derives its form from the world. That is why it is said that the logico-pictorial form which makes propositions logical pictures is the form of reality (TLP, 2.17; 2.18). Logico-pictorial form is what makes linguistic facts possible as well as state of affairs. That is what propositions and facts share. Form establishes the link between language and the world and what makes structures - facts - possible in both realms:

2.151

Pictorial form is the possibility that things are related to one another in the same way as the elements of the picture.

This 'possibility' lies as we have seen, in the elements of picture and what is pictured sharing their possibilities of combination. This is attained if a name stands for a thing, i.e., if it is its symbol. To use the name with signification is then to combine it in ways that are possible for the things. Otherwise it ceases to be a name, to be its representative. Hence there cannot be non-sensical combinations of names, for there cannot be impossible combination of objects. And if there are different kinds of things, i.e., things with different and restricted possibilities of combination, this will be expressed in language in the different symbols which stand for those things, for both have the

same possibilities of combination.

62. (ii) A picture represents independently of truth-value.

A distinction must be borne in mind: form not only makes linguistic facts possible by making names representatives of objects and so being the possibility of their actual combinations; it also makes representation possible independently of truth and falsity. At the heart of the picture theory Wittgenstein states his sense-priority thesis in this manner:

"What a picture represents it represents independently of its truth or falsity, by means of its pictorial form"(2.22).

In Tractarian terms to make the above distinction may appear somehow artificial for, according to Wittgenstein, to represent or be a picture is precisely to represent independently of the truth-value. But the distinction is helpful insofar as it makes clear the independence of sense from truth or falsity, as a necessary condition of representation as such. It is form that accounts for the proposition as representing, which means it has a sense independent of truth-value. But a question may be asked. If the form that a picture has is that of the things it represents and these only occur in facts, how can it be independent of the facts, and yet have the form of those facts? We shall try to answer the question indirectly by showing what it means for a proposition to be either true or false.

63. Because a proposition represents the facts it can be compared with them. The facts make it true or false.

"In order to tell whether a picture is true or false we must compare it with reality"(2.223).

Let us consider what this comparison may involve. In picturing - or in a proposition considered as a picture - we have to distinguish between 'what says' and 'what is said'. What says in the proposition is the propositional

sign. What is said is its sense, i.e., the situation that it represents. The propositional sign can express a sense, not because its constituent elements are physical signs, but because they are symbols and so do something, i.e., combine in a particular way. This combination shows itself, naturally, but by doing so it says that the situation shown obtains; whether it does or not has to be verified. A proposition in showing what it represents by means of what represents (the propositional sign) is not self-referring. What it expresses, shows (i.e., its sense), is external to it, not contained in it. The sense of the proposition is not an intermediary between the propositional sign and the situation. The sense is the situation (TLP, 2.221; 4.031). They are one and the same. There is only propositional sign and sense. This is so because a proposition is a concatenation of names. The meaning of names is the objects they stand for. There is no intermediary between the name and the object; so a concatenation of names expresses a concatenation of objects - a situation - which is the sense of the proposition. If sense were something different from the situation it represents, names would have to have sense too (as Fregean names have), and then the comparison between sense and situation would be a comparison between some 'content' and a situation; therefore the propositional sign would be a third party. For Wittgenstein what pictures and what is pictured are brought into comparison directly; there is no intermediary (TLP, 2.1512, 2.15121; see LO, p. 27 in connection with 4.023). This is also clearly so in his treatment of picturing in the Philosophical Remarks.

64. Tractatus 3.13, which has been variously interpreted, can be seen to make this same point:

"A proposition includes all that the projection includes, but not what is projected. Therefore, though what is projected is not itself included, its possibility is. A proposition, therefore, does not actually contain its sense, but does contain the possibility of expressing it. ('The content of a proposition' means the content of a proposition that has sense). A proposition contains the form, but not the content, of its sense".

The proposition is the propositional sign in use, a projection. It contains a linguistic 'representative' fact; this is what represents and must be different from what is represented, as what projects must be different from what is projected. The latter is the situation, the state of affairs as a combination of objects. So, what is represented is not included in what it represents. If this were not the case the linguistic fact and the represented fact would be one and the same, and so representation impossible. Nevertheless, Wittgenstein says, the linguistic fact contains or includes the possibility of what is represented. This is precisely because it contains its form. This form, as we have seen, is what makes the proposition into a picture capable of expressing a situation. The proposition cannot contain the situation as such, form and content, i.e., objects in combination. Here Wittgenstein makes clear that sense is form and content (Inhalt) - he says elsewhere, too, that "An expression is the mark of a form and a content" (Inhalt) (3.31) . If by sense we understand the situation as Wittgenstein does, then it is clear that what a proposition can contain is the form of its sense, not its content, i.e., the actual objects in combination. Form is what is shared by language and reality. That language contains the form of its sense is due, as we have seen, to the fact that propositions are constituted by names which have taken on the form of objects they stand for, i.e., their possibilities of combination. If the proposition contains both the form and content of its sense then what represents and what is represented would be one and the same. But because the proposition contains only the form

of its sense, it contains the possibility of expressing it, of representing it. This guarantees the possibility of the sense - the situation - obtaining in the world. That is to say, form is what makes representation possible by being the possibility of structure. So, it guarantees that what it represents, the fact or structure outside itself, can obtain in the world, for proposition and situation share their form.

65. Wittgenstein tells us that propositions can only say how things stand, i.e., material properties of objects brought about in their combination. So, when a proposition is laid against reality like a measure the 'comparison' or 'measurement' must be one of structure, i.e., of actual combination. This may be seen to involve what was earlier called the structural correlation between what represents and what is represented, between picture and what is pictured. It is by this comparison involving the structural correlation that we ascertain whether a proposition is true or false, i.e., whether the situation it represents obtains or does not obtain. This presupposes that we understand the proposition prior to the ascertaining of its truth or falsity, prior to its actual comparison. This understanding of the proposition is precisely an understanding of how it should be compared with reality, i.e., understanding the conditions of its truth and falsehood. The understanding of a proposition - or its construction - is possible if its constituents are understood, i.e., if they are known to refer to such and such objects prior to the actual comparison with reality. Hence the object cannot be given meaning in that comparison for it is presupposed by it. In other words, there must be a correlation between the name and the object it stands for, prior to the structural correlation and making it possible. This is what might be called the formal correlation. It is the correlation by which a name takes on the form of its object, its possibilities of combination and becomes its

"representative". This correlation is what makes sense possible; in it lies the possibility of the proposition for it is by this correlation that the pictorial form may be shared by picture and what is pictured. As form is the possibility of structure, then the formal correlation is the possibility of the structural correlation. The former has to do with the sense of the proposition, the latter with its truth. Both are inseparable for the formal correlation is presupposed by the structural one and makes it possible. This is another way of saying that there must be a priority of possibilities over actualities.

66. It is the formal correlation that can be identified with the pictorial relationship by means of which pictorial form between picture and what is pictured is shared:

"The pictorial relationship consists of ^{the} correlations of the picture's elements with things"(2.1514).

These are the correlations by which the picture touches reality (2.1515) and which makes the picture into a picture,(2.1513). They make the sharing of form possible, and as a result "the possibility that things are related to one another in the same way as the elements of the picture".(2.151), i.e., the possibility of structure. Form is a precondition of structure and not its consequence. Nor is form something that picture and what is pictured have independently of any prior correlation between their elements, i.e., something happening to be the same, with the same possibilities, and so capable of being correlated. Rather the form of the picture, as it has been said, is only contained in it by having been 'absorbed' via its constituents from the things external to it. The form of the picture is dependent upon the elements of that which it pictures.

67. To say that there is a formal correlation between names and the objects they stand for, as well as a structural correlation, is to say that there is a double aspect to the one-one correspondence between name and object. In the structural correlation the particular name as a component of an elementary proposition stands for the object whose representative it is (under such-and-such a material property or such a particular combination). This is what we might call the ordinary one-one correlation. One proposition only actualises a possibility of combination; it does not actually express all possibilities of combination of the names it contains although it presupposes them. Only the totality of propositions about a certain object would. Any composition or any one combination, does not reveal all possibilities of combination, these are only contained in the 'real name' (TLP, 3.3411) made so by the formal correlation. This is the other manner of the one-one correspondence presupposed by any one of the propositions in which a symbol of the 'real name' occurs. This correlation cannot be said; it is shown, even in a different manner from which the structural one is shown. For this latter one is explicitly occurring between a particular proposition and what it says, while the former is presupposed and implicit in all propositions about an object(s) but irreducible to any one of them. For actual occurrences are 'unessential to a name'. Their possibilities are essential and shown in what is unessential. These possibilities are the form which cannot be said; propositions show the logical form of reality. They display it and that is why,

"In order to be able to represent logical form, we should have to be able to station ourselves with propositions somewhere outside logic, that is to say, outside the world" (4.12).

But if the formal correlation which makes a name the representative

of an object, and so enables the proposition in which it occurs to share the form of the state of affairs it represents, cannot be reduced to any one structural correlation, but is presupposed by it, how is it given? How does a name become a representative of an object, i.e., share all its possibilities, if names only have meaning in the nexus of a proposition (3.3) or if names are only names in combination? If the formal correlation is prior to any structural one, are we not saying that a name must have a meaning prior to and independent of any of its occurrence in a proposition? How is this to be reconciled with the claim that names only mean in actual combination? How are names given meaning and so come to sustain all possibilities of combination that the objects they stand for possess?

68. It is tempting to formulate these questions as a problem of language acquisition. That was the way Russell saw it. His answer amounted to saying that it is in direct confrontation with an object that we learn its meaning, all its possibilities of combination. This was not possible for Wittgenstein because any direct confrontation involved identifying the object under some material property, and identification implies that the object is already known, i.e., it is capable of being identified under such a property. Wittgenstein was not interested in the epistemological or psychological questions that may account for the learning of the meaning of names. But his doctrine that names only mean in combination is a clear indication that the meaning of names and sense of propositions are inseparable. His assumption was not the Russellian one that appears to suppose that language has to be learnt by learning each of its individual ultimate items in acquaintance. Wittgenstein seems to begin from the assumption that the given is language, i.e., propositions that have sense and may be true or false, understood prior

to their truth and falsehood, and constituted by names in combination. So the question as to how this is possible does not centre round the giving of meaning to names, but round the conditions that must be fulfilled for names to have the meaning they do have, and language to represent in the way it does. The necessary conditions that Wittgenstein establishes may be viewed under what we have called the formal correlation, or the sharing of formal properties by name and object, as the precondition or the possibility of constructing propositions in which material properties are produced. But if the formal correlation can only be accounted for by knowing the "real name" of an object which is "what all symbols that signify it have in common", then to know the real name is to know all propositions about the object, all its possibilities of combinations, i.e., to know the language. What is presupposed then in the account of the meaning of names is language.

Language cannot be explained outside language, for one cannot get outside language. Perhaps the point we are trying to make here in a clumsy manner, is best made by Wittgenstein in Philosophical Remarks, section 6. This remark could be taken as his interpretation of what elucidation and definitions are, where the unanalysable terms occur. It also shows how, in order to understand those, the understanding of names is already presupposed. That is to say, the formal correlation between a name and the object it stands for must already be there. The act of ostension cannot give the name a meaning which is another way of saying sense is independent of the facts:

"If I explain the meaning of a word 'A' to someone by pointing to something and saying 'This is A', then this expression may be meant in two different ways. Either it is itself a proposition already, in which case it can only be understood once the meaning of 'A' is known, i.e., I must now leave it to chance whether he takes it as I meant it or not. Or the sentence is a definition.

Suppose I have said to someone 'A is ill', but he doesn't know who I mean by 'A', and I now point at a man saying 'This is A'. Here the expression is a definition, but this can only be understood if he has already gathered what kind of object it is through his understanding of the grammar of the proposition 'A is ill'. But this means that any kind of explanation of a language presupposes a language already. And in a certain sense, the use of language is something that cannot be taught, i.e., I cannot use language to teach it in the way in which language could be used to teach someone to play the piano . And of course is just another way of saying: I cannot use language to get outside language". (my emphasis).

To know "already" what kind of object it is is to know the form of the object. This is what is presupposed if a proposition in which the name occurs is to be understood. Form is what language contains to be able to represent the world, and that out of which we cannot step. Let us now consider how form is precisely that which establishes the "essential" or internal link that the proposition and reality have.

69. (iii) The proposition's internal relation to reality. Remark 4.03

of the Tractatus says:

"A proposition must use old expressions to communicate a new sense. A proposition communicates a situation to us, and so must be essentially connected with the situation. And the connexion is precisely that it is its logical picture. A proposition states something only in so far as it is a picture".

The "old expressions" that communicate new sense are the indefinables of ordinary language, its ultimate constituents, i.e., names. It is what is needed to know in order to understand new senses (4.024). If the old expressions were not known prior to their new combination communicating a new sense, each proposition would be an indefinable itself. The proposition's sense is the situation it represents, it is external to it and so not contained in the proposition itself, as we have seen. There must be an essential or internal connection between proposition and the situation external to it. In what does this connection consist? If the

essential connection is thought to be between proposition and an actual existing state of affairs, then in the case of a proposition which is false, this connection would require that the situation the picture represents be an 'abstract' entity that counts as its sense. But, if there were not such an abstract situation how would the 'essential' connection be understood? That is to say, if a proposition is false so that the situation it represents does not obtain, how could it be claimed to have an essential connection with something that does not obtain? Wittgenstein clearly maintains that the essential connection holds regardless of the proposition being true or false, for it must have it in so far as it is a picture and to be a picture, according 2.22 as we saw before, is to represent independently of truth-value. But a proposition is a picture of such a kind by means of its pictorial form. So it is form that must account for the essential connection. The form that makes a proposition a picture, i.e., a structure representing how things stand, is ultimately the form of objects whose representatives are the elements of the picture. So, the essential relation which is the sharing of form, is a connection via elements, and therefore it does not require postulating an 'abstract state of affairs' as the entity to which the proposition has to correspond. To contend that

"The possibility of propositions is based on the principle that objects have signs as their representatives"(4.0312).

or that a proposition is "understood by any one who understands its constituents"(4.024) points to the fact that the essential connection is that of form, i.e., of possibilities. So, language and reality are essentially connected in their possibilities, in form.

Linguistic constituents share the formal properties of the objects of which they are the representatives, and this is so, we have claimed, by virtue of the formal correlation. To be a picture is to have a sense

either-true-or-false. This is the precondition of being able to say something and so to be able to be compared with reality: "A proposition states something only in so far as it is a picture". To be a picture, to represent, is inseparable from saying. To have a sense and to say something are not two independent acts. Wittgenstein also says this:

"A proposition shows its sense. A proposition shows how things stand if it is true. And says that they do so stand" (4.022).

This may be taken as an indication that the proposition in the Tractatus is an assertion, i.e., a saying. So a proposition's asserting something is equivalent to its presenting (showing) its saying and saying that it obtains. Saying what is true amounts to the 'comparing' of the proposition with reality involving the structural correlation. This is the way the proposition refers to reality and so is used as a picture. Hence, a view of language in terms of picturing makes assertion - conceived as something to be added to the proposition - unnecessary for it is part of the picture. This may be taken as the reason why the question of assertion is not explicitly treated in the Tractatus. It is irrelevant, for a proposition expresses a sense and by doing so says that what it expresses obtains. Propositions are nothing but sayings about the world.

70. By way of summary of the main points of the chapter the following may be said. The logical form that language contains and by means of which it represents reality is an ontological form, i.e., the form of reality. Thus the priority of this form lies on the side of reality, and derivatively on the side of language. Language "absorbes", derives - and so shares - the form of reality. This is the form that enables language to be capable of making sense. In what manner is this form contained in language? By having names as representatives of objects.

Names take the form of objects on to them, and so have the same possibilities of combinations as objects have. This is what makes signs symbols, whose employment is determined by those possibilities, i.e., the formal properties that may be seen as the formation-rules which fix the meaning of names. Ultimately the form of reality rests on the form of objects, and these are what make structure possible, both for states of affairs and for the propositions that represent them, since both structures have the same underlying form.

This shows that the relation between language and the world in the Tractatus must be viewed in terms of possibilities. This relation is neither one of total dependence nor of total independence, but rather one which is both dependent and independent. This two-fold relation dissolves the dilemma with which the Notebooks was confronted, and makes Tractarian isomorphism not one of a traditional kind but one of a two-fold language-world relation: from world to language by which language "absorbs" the form of the world, i.e., the formal correlation; and from language to the world whereby language says something (true or false) of the world, i.e., the structural correlation. Language then may be regarded as totally dependent on the world for its form, but independent by virtue of its structure, for although "form is the possibility of structure" it is not so in so far as this or that combination has to occur. For language may construct configurations that do not obtain in the world. It is independent of the world in this respect, i.e., independent of its actual structure, or facts. That is why sense is independent of the facts. A proposition's making sense and so its capacity to represent a situation that may obtain in the world is guaranteed by having the same form with the world. This capacity is not given to the proposition by having the same structure with it.

So it may be said that the proposition's relation to the world in

virtue of its sense is accounted for by their sharing of form; the relation it has in virtue of its truth or falsity is accounted for by their structure. The first is a condition of the second. Both are inseparable and present in the same act of representation or picturing. But they are irreducible to each other, for a proposition makes sense independent of truth. Although sense is independent of what is the case it is not a priori detached from reality, but dependent on it, on the form of reality.

It may be seen that there is a parallelism between certain pairs of distinctions which are partly making the same point: form/structure, question 'what'/question 'how', possibilities/actualities, what is shown/what is said. These distinctions are correlated and substantiate the central semantical distinction of sense/truth. The priority of the former aspect of the distinctions over the latter means that aspects are not independent of each other: what is prior to the presupposed ground of what depends on it. They are interdependent and inseparable. Finally, that 'picturing' is an essential relation between language and reality, which is equivalent to their sharing of form, i.e., of possibilities, is, I would take it, the fundamental insight of the Tractatus that Wittgenstein never abandoned and which may be regarded as the central core of his philosophy.

CHAPTER FOUR

INTERPRETATIONS OF THE ISOMORPHISM OF THE 'TRACTATUS'

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1. In the previous chapter we have seen that a proposition can represent reality as a picture because its elements take on the form of the objects of which they are representatives. This form is all the possibilities of combination which the object has by being the kind of object it is, i.e., its internal or formal properties. To know the meaning of a name is to know all its possibilities of combination. Hence the meaning of a name cannot be fixed or given, by knowing just one (or some) combinations. To know any one combination presupposes the knowledge of all other possibilities, i.e., capacity to understand all the propositions in which the name can enter. This amounts to knowing the language.

Hence the correlation that there must be between names and objects is ultimately the internal correlation there must be between language and the world in terms of form. The actual correspondence of true propositions and facts is a consequence of that prior internal relation. They show it. Thus, this internal relation is not conferred on the proposition by virtue of the structure it possesses. Rather, that its structure represents is a consequence of having the same form as that of the objects for its possibility. It is the sharing of form which constitutes the internal connection between proposition and situation. Identity of form in elements is, then (i) the first necessary condition of representation, i.e., the internal relation of proposition and the fact, which involves and yields as

a consequence all the other conditions; (ii) equal numerical multiplicity of elements having the same form (same possibilities of combination or internal properties) which, (iii) make any particular combination a structure capable of representing the combination in which the objects they represent can enter.

Because form is the fundamental condition of representation, Wittgenstein can say that a picture by virtue of its form pictures independently of truth value, and also that it is internally or essentially connected to reality by virtue of its form, not by virtue of its structure. Because language and the world share form, Wittgenstein's isomorphism establishes that the possibilities of language are those of the world. So, language depends on the world for its possibilities. Now, if form is not seen as the primary condition of representation on which all others depend, the isomorphic correspondence between language and the world is that of two independent structures that simply match, but then, the matching is ultimately inexplicable and the correlations between the two structures external. Hence there cannot be an internal or essential connection between language and the world.

2. This external isomorphism is the one propounded by Russell, and the one he implicitly ascribes to Wittgenstein in Tractatus (as we shall presently see) by using form and structure indistinguishably as he always has, and ignoring the internal connection between language and reality that the notion of form involves. There are other commentators who imply in their doctrines adherence to Russell's interpretation. This interpretation cannot be correct for it denies the most fundamental doctrines of the Tractatus: the priority of form or possibility over actuality, the internal connection between language and reality, (and so between logic and the world) consequently the priority of sense over truth. In what follows,

firstly we will consider Russell's views; secondly we will deal with some of the views of other commentators; finally, we will conclude with a discussion of isomorphism and ordinary language.

1. Russell's Interpretation of the Isomorphism of the 'Tractatus'

3. The introduction to the Tractatus must be taken as Russell's most authoritative document concerning his interpretation of Wittgenstein's work. Russell's understanding of the isomorphism of the Tractatus may be derived from an examination of the terms 'form' and 'structure' as used in the 'Introduction.' He does not discuss them explicitly, or comment on Wittgenstein's distinction as, e.g., Ramsey in his 'Critical Notice' did. In fact, Ramsey's review of the Tractatus is also a critique and evaluation of Russell's 'Introduction,' and appears to fill in gaps left by Russell's discussion. Russell says that the question which Wittgenstein attempts to elucidate in his book is: "what relation must one fact (such as a sentence) have to another in order to be capable of being a symbol for that other", (p.ix). Russell assumes that there must be first a fact which then can become a symbol-fact for another. Our contention has been that if a proposition or sentence- Russell does not distinguish them here - is considered a fact it is because it is already a symbol. A proposition cannot be but regarded as a medley of words, unless it is a symbol. Russell's assumption that there must be first a fact that then becomes a symbol is shared by other commentators as we have seen, e.g., Anscombe.

4. Russell's understanding of Wittgenstein's answer to the question concerning the capacity a fact must have in order to symbolise another fact is this:

"In order that a certain sentence should assert a certain fact there must, however the language may be constructed, be something in common between the structure of the sentence and the structure of the fact. This is perhaps the most fundamental thesis of Mr. Wittgenstein's theory. That which has to be in common between the sentence and the fact cannot, so he contends, be itself in turn said in language. It can, in his phraseology, only be shown, not said, for whatever we may say will still need to have the same structure" (p.x).

Russell's expression "there must be something in common between the structure of the sentence and the structure of the fact" (my emphasis) suggests that there is an aspect of the structure that need not be in common, as if there were 'essential' and 'accidental' features in the structure, where the "something in common" would be the essential feature. This intimation may only be a loose way of speaking, but appears to be intended, for when Russell comments on Wittgenstein's analogy between "projection in geometry" and the "linguistic expression" he says:

"These projective properties correspond to that which in his theory the proposition and the fact must have in common, if the proposition is to assert the fact" (p.xi).

These common projective properties are what is shown to remain constant in whatever way we choose to project or "however the language may be constructed". These are the properties which would determine the 'essential structure' that proposition and fact have in common, if one is to represent the other. If this is correct, then, these common properties might be seen as standing for 'form' or 'pictorial form' as "the possibility that things are related to one another in the same way as the elements of the picture" (2.151). This, at first sight, appears to be Russell's view for he also says:

"We speak of a logical picture of a reality when we wish to imply only so much resemblance as is essential to its being a picture in any sense, that is to say, when we wish to imply no more than identity of logical form" (p.xii).

Does Russell, then, see the significance of the distinction between form and structure and the point Wittgenstein attempts to make with it? The answer seems negative. Other passages confirm that the distinction does not appear important for Russell and that he identifies form with structure. The following two passages illustrate this:

- (a) "A picture can correspond or not correspond with the fact and be accordingly true or false, but in both cases it shares the logical form with the fact" (p.xii).

What is it then that makes the picture not correspond with the fact if they share a common form? Is it its structure? This seems to be the most obvious answer and what Russell might have had in mind. Nevertheless this is not the case, for he also says:

- (b) "...his doctrine of pure logic, according to which the logical proposition is a picture (true or false) of the fact, and has in common with the fact a certain structure. It is this common structure which makes it capable of being a picture of the fact, (°) but the structure cannot itself be put into words, since it is a structure of words, as well as of the facts to which they refer. Everything, therefore, which is involved in the very idea of the expressiveness of language must remain incapable of being expressed in language" (pp.xx-xxi) ((°) my emphasis).

A proposition is a picture in so far as it has a structure capable of representing. This capacity of structure does not derive from its simply being a structure but from the fact of being the kind of structure that it is, and this is due to form which makes structure possible. That is, a structure is just one actualised combination of elements that does in fact represent, but why it can ultimately do so is because of form. To account for this capacity of representing seems to be the point of Wittgenstein's distinction between form and structure. Now it may be seen from the two passages quoted above that Russell either assimilates form to structure

completely or that he is inconsistent. The former alternative seems to be the most likely. The inconsistency, though, amounts to saying in (a) that the common form is what makes a picture capable of representing a fact irrespective of its truth or falsity and in (b) that it is the common structure which makes it capable of being a picture of the fact also irrespective of its truth or falsity. Wittgenstein always claims that it is form which gives the representative capacity to a picture, i.e., form is what picture and pictured must have in common in order for one to represent the other. If structure represents it is because the formal correlation is already presupposed. Structure is a consequence of form. This is what Russell ignores by ignoring the distinction. If it is thought that structure has a representative capacity of its own, then the distinction form/structure is superfluous. And the matching of the two structures as an internal connection is inexplicable.

5. Russell was not really concerned with how the relation between language and reality could be internal in character and could only find "intellectual discomfort", as he puts it in the 'Introduction', in the notion of internal relations as something that has to be shown. This internal relation was a problem not only in connection with the question of common structure but also in connection with the related question about the number of things that could be said to exist - a problem which Russell found "peculiarly acute":

"Wittgenstein denies that we can make propositions as to how many things there are in the world, as for example, that there are more than three"(p.xxii).

All this is symptomatic of Russell's failure to see that there is an internal connection between language and reality that must be brought about by form and not by structure. It leaves Russell, in his interpretation of

Wittgenstein's relation between fact and proposition, with three requirements for isomorphic correspondence; they are the ones he has always maintained: (i) equal numerical multiplicity; (ii) shared structure in picture and facts and (iii) correlation between the elements (cf. Wittgenstein's own requirements, pp.130-131). This means that picture and pictured are considered facts in their own right independent of and prior to correlation between the two so that, by means of the correlation, one becomes a symbol of the other. Hence both must have a structure independent and prior to the correlation. As form is the possibility of structure, according to Wittgenstein, to have structures independent in picture and pictured is also to have their forms independent. This is what Wittgenstein denies. Nevertheless similar views to these of Russell's are attributed to Wittgenstein by other commentators.

II. Other Interpretations of Wittgenstein's Isomorphism

6. One of the most characteristic of these interpretations is that propounded by Miss Anscombe. It may be helpful to recall what she says in her Introduction to Wittgenstein's Tractatus in this connection (see above p.132ff.). It is clear that her interpretation of picturing involves, as she explicitly claims, that a picture is intelligible as a picture prior to making any correlation between the elements of the picture and those outside it. The picture must itself be a picture before it becomes a picture of something outside it. It is then by means of an external and a structural correlation that the picture is made to represent something. The correlation must be structural and, so, external for the following

reason. The elements of a picture and those of a Sachverhalt can only be correlated, according to this interpretation, when they constitute a fact, that is to say, when they occur in combinations - for they cannot occur in isolation. These combinations, according to Wittgenstein, bring about and express material properties. Therefore, if correlation of elements can only be made when material properties obtain, which is when structure obtains, then material properties or structure (contingent actualities) will determine the correlations which make representation possible. But actual combinations or structure cannot determine form, which is the fundamental precondition of representation. Form is what is precisely presupposed by these combinations. Structural combinations presuppose form, presuppose the very possibility of combinations, rather than determine it. Form is the possibility of structure and not vice versa. Let us now summarise the various consequences that derive from this (e.g., Miss Anscombe's) interpretation:

(i) The structure of the picture, what makes it into a fact in its own right, must be independent of the structure of the fact that it represents.

This is so because:

(ii) Correlations between picture and things are made by us when it is seen that "significant relations hold among the elements of the picture". Hence, the picture must have already a form, or its elements must already be such that make it possible for their relations to be capable of representing. So form is also independent, autonomous, contained in the picture before correlations are made.

(iii) It follows necessarily that the correlations must be external; "the externality of the correlations between the elements of a picture and actual objects is an important feature of Wittgenstein's account", Miss Anscombe says (p.67, my emphasis).

(iv) Correlations can be made when the picture is seen to be an 'appropriate' fact, i.e., when the relations it presents are "significant" for representing what we want. This means we must be first confronted with the picture and then give its elements a new meaning by making them stand for things. This involves an unavoidable alternative: either we already know the meaning of the things outside, for we are able to identify them - and then 'picturing' is left unexplained - or picturing must be based on something like an act of acquaintance or ostension saying 'A' means this'.

Let us now consider implications of these four points, through detailing the views of some commentators who include them in their interpretations.

7. That there is an independence of structure between language and the world, - and consequently an independence of form - is explicitly ascribed to Wittgenstein by P. Hacker. In his Insight and Illusion he says:

"The world has an a priori structure and likewise language has a priori structure. These structures are identical, although this isomorphism can only be shown, not said"(p.178).

"The Tractatus had presented a conception of language according to which language has an a priori structure which is then matched on to a given reality like a stencil which is pinned on to the world (NB,p.53) by means of simple names which 'constitute a connection between language and reality'"(p.156).

It is interesting that the Notebooks are referred to in order to substantiate this 'stencil' mode of matching between language and reality. For as we saw in chapter two that view created problems for Wittgenstein and led him to the explicit Tractarian distinction between form and structure which accounts for a different kind of correlation between language and the world. There is development from Notebooks to Tractatus in this important issue. Rush Rhees has pointed out, when he criticises Miss Anscombe's interpretation of the picture theory, that she could have been misled by the doctrines in the Notebooks, not realising that:

"What he finally wrote in the Tractatus is in many things a long advance from those earlier remarks, even where they seem fairly familiar. The conception of 'sense' is more carefully worked out; and so is the view of picturing in relation to logical form"(1970,p.14).

Perhaps the same could be said of Hacker's interpretation, although his reasons for thinking that language and world structure are a priori and independent, prior to the actual pinning of names on to the world, appear to be Tractarian. They are based on the nature of names and how they signify. Hacker says:

"Names in the Tractatus are the primitive unanalysable signs that combine according to rules of logical syntax to form propositions which are capable of describing any state of affairs. The logical syntax of a sign is completely independent of its meaning or Bedeutung (TLP,3.33)"(pp.40-41).

He also says:

"the logical syntax, which is a priori determined..."(p.47).

and

"Knowledge of the syntactical rules for the use of a sign is knowledge of how a sign signifies. What it signifies is, however, independent of syntax"(p.48).

8. As we discussed earlier Wittgenstein makes the 'what' of things, what they are, a precondition of 'how' they are, i.e., their combinations which are governed by the rules of syntax. This priority, and the fact that what things are cannot be said, does not make the 'what' and the 'how' of things independent from one another. On the contrary, what things are, i.e., their form constituted by possibilities of combination, is the ground and the necessary precondition of how things are. The how does depend on the what. For structure or actual configurations of objects depend on form which is the possibility of these combinations. To interpret remark 3.33 as establishing a logical syntax totally independent of Bedeutung - the things themselves - is to defeat the purpose of that very remark. It is to fall into what is involved in the Russellian position

it is trying to criticise, namely, the theory of types. Wittgenstein's claim that 'what things are' cannot be said, must not be taken to be saying that 'how they are' is independent from 'what they are'.

Russell holds the independent a priori nature of the logico-linguistic structure over that of the world in a rather Platonic mode, as we saw. This independence is revealed in his theory of types where rules must be 'externally' stipulated. In other words, rules are given in order to establish that if a sign is first order it is so because it stands for such-and-such a thing; a sign is second order because it stands for the property of a thing, etc.. Thus when a sign is given a meaning, the thing must be mentioned. For Wittgenstein, whether an object - a referent - is a particular or property cannot be said. It is shown in the symbolism. The symbols stand for things by being their "representatives", i.e., having the same possibilities of combination. This property is not conferred on to symbols by rules externally stipulated. The 'representativeness' is an 'absorption of form' manifested in the combinations of symbols, i.e., shown in their application. The combinations may be expressed by rules, but they are a consequence of the fact of symbolising being already present, not vice versa. If syntax only applies to signs (names) and determines how a sign signifies (i.e., how it is a symbol) then it is not a name's standing for a thing that makes it a symbol, but the rules. A name then becomes the representative of an object by virtue of certain rules, and not **by** virtue of 'absorbing' the possibilities of combination from the object as such. Rather syntax determines those possibilities which must then be imposed or attributed to an object. Hence, syntax will determine semantics. But the question would then be how that external correlation between symbol and object could ever be established without having to mention the object. This was Russell's position, and why, in giving

signs meaning, he had to mention the things, i.e., the Bedeutung.

9. Contrary to the traditional interpretation, what is stated at 3.33 is not the total independence of syntax from things, but rather the fact that their dependence cannot be said. A name is a symbol by being a representative of an object, i.e., having the same possibilities of combination of that object or the same form. This is what constitutes it as a symbol. The rules are a consequence of this and so must be seen to be grounded in the things themselves, i.e., in their 'what' or their form. That is why at 3.334, it is said

"The rules of logical syntax must go without saying once we know how each individual sign signifies".

If syntax is what determines how a sign signifies, then its rules must be said. That is what must first be known and naturally must be known independently and a priori. But it is precisely because rules are dependent or grounded in the things, that we can know how signs signify, i.e., stand for things without a prior necessity for rules to be said. This is also why the connection between symbol and thing is not external, but internal, and this is what cannot be said. It is this internal connection that underlies Wittgenstein's rejection of Russell's theory of types. Naturally, Russell's difficulties in accepting this internal relation is a hindrance which does not permit him to see the importance of what can only be shown and not said. Of course in the account of the a priori independence of rules of syntax from Bedeutung the question as to why the structure produced by the rules of logical syntax can represent those of the world must be left without an answer. They just happen to fit. Language and the world are such that correlations between them can be made for one to represent the other. If they share the same form, this sharing must be understood as a coincidence in correspondence, for each

has form in its own right independent of the other.

10. It is clear how Hacker's interpretation of 3.33 is Russellian in character. It has to maintain that there could be a logic even if there is no world, a contention which is explicitly criticised by Wittgenstein in 5.5521. If there can be logic without world then the relation between logic and the world must be 'external'. Then logic would not be based on the fact that there are empirical contingent propositions. It would not be true that logic only presupposes "that names have meaning and elementary propositions sense"(6.124). Logic would have nothing to do with the truth or falsity of empirical statements or the possibility of empirical statements at all, i.e., the conditions of what can be said.

11. There is another point to be noted. The externality of the correlation between picture and pictured would necessarily involve the sense of propositions having to depend on the truth of other propositions, i.e., on those propositions expressing the identification of the items to be correlated, and so ultimately on the existence of such propositions and on some kind of presentation of those items. That is to say, experience would be at the basis of sense. This is what would have to be attributed to Wittgenstein under the present interpretation of his views. In other words, it must be a natural consequence, as Hacker and others think, to claim that the direct link of propositions and the world is established via correlation of name-object by means of ostension. So it is ostension which establishes the link between language and the world. If this is the case, it is not form which links language and the world, since any correlation made by ostension must be a structural one, (see above p.203ff) for objects only occur in concatenations, i.e., it is only in the nexus of a proposition that a name has meaning (3.3). It is only in those concatenations - in

structure - that an object could be pointed out or picked out by means of ostension. Therefore, the object can only be identified by means of its material properties (actualities). The correlation between name and object would have to be said, i.e., expressed in a contingent proposition. If names occur in concatenations they must already have a meaning when they occur in such a concatenation. It could not be consistent in the light of 3.3. to maintain that a name was given a meaning by saying "'A' means this". If that could be done 'A' would have a meaning apart from its occurrence in the nexus of the proposition. Also "'A' means this" would have to be true and so propositions with sense containing 'A' would have to depend on the truth of "'A' means this". But even if names were given meaning in concatenation, i.e., in the very act of understanding the proposition in which they occur, as Miss Ishiguro argues, those propositions would have to be true, as she admits. Whether the meaning of names is given in experience or by some kind of agreement that does not necessarily require confrontation or experience, truth must be at the basis of sense. This truth could never yield knowledge of the meaning of the name, i.e., of all the possibilities of combination of the object, for truth only involves actualities, which presuppose already possibilities. A name cannot be given a meaning in terms of any actuality, i.e., actual combination. If this were not the case the object would have first to be identified by means of a true thought and then named. But in order to think truly or falsely of an object the object must already be named or be represented in thought.

12. J. Griffin in his account of Tractarian picturing in Wittgenstein's Logical Atomism maintains that the pictorial form's ultimate justification is the forms of objects which names, by being their representatives, must take on (or absorb). This view requires that formal properties or

possibilities of combination are presupposed and are prior to any particular combination in which the name occurs. This accords with the main lines of the explanation given here which attempts to show that only when the correlation, name-object, is not external, and when possibilities of combinations are prior to any actual combination, can it be maintained that a proposition can represent independently of its truth value, i.e., that sense is independent of the facts. Nevertheless Griffin's interpretation of proposition 3.13 of the Tractatus (parallel in some way to the one given by Miss Anscombe, (1959, p.68-69)) leads to consequences concerning the sense of propositions and meaning of names that our account excludes. Let us consider why this is so.

13. Disregarding the appropriate or most adequate translation that the term Satz may have (a matter that Griffin discusses in connection with 3.13) certain independent points may be made. Griffin claims that Satze are not symbols because 3.13c says that

"a Satz does not actually contain its sense, but only the possibility of expressing it. A Satz, then, is somewhere between sign and symbol" (p.129).

And it is added that what "a Satz includes is explained in the long proposition at 3.13". Griffin takes this remark not to be about a proposition in its projective relation to the world, i.e., as a picture in use or a proposition with a sense, (agreeing here with Miss Anscombe). He says that for a proposition to have sense it must have names, and not dummy names. Satz in 3.13 can only contain dummy names, it is argued, because here Satz contains only the form of its sense, not its content.

14. This view implies that a proposition proper (sinnvoller Satz) must contain its sense, i.e., both form and content. In our own commentary of 3.13 above (p. 185ff.) this was shown to be an impossibility. For the

proposition represents its sense (2.221) and its sense is a situation, - i.e., a combination of objects (3.21). Thus, the sense of a proposition (in its aspect of content) must not be contained but external to the proposition for it is what is said. What says is the propositional sign. What is said is not contained in what says, but its possibility (form) is. This the Tractatus says at various places: the proposition or picture contains the possibility of its sense (2.023) and so does the thought (3.02). Hence the sense of a thought - and therefore of a proposition in its projective relation to the world - is not included in the thought, but is external to it. Thus whether a proposition contains or does not contain its sense cannot be the criterion of distinguishing between Satz and sinnvoller Satz, as Griffin believes, and 3.13 cannot be said to be concerned with Satz as something which is not a symbol because it contains no names. For a proposition - which must always be a proposition in use - never contains its sense (content). How does it picture then? By virtue of the combination of its names, i.e., by its structure whose possibility is the form of its names. For this reason 3.13 may be taken to restate what Wittgenstein has said in the 2.15 about a picture that represents independently of its truth and by virtue of its form. It is important to note that in 3.13 Wittgenstein makes a distinction between the form and the content of sense, i.e., of a situation. The picture represents because it does share with the situation its form. The content which is the actual combination lies outside it. This cannot be shared. If both content and form were shared by the proposition the proposition and situation would be one and the same.

15. 'Content' perhaps could be taken, as some commentators believe,

as an intermediary between 'what says', i.e., the propositional sign, and 'what is said', the situation. Then 'what says' would not act as a picture of what it said but its content would. The 'content' would have to be compared with reality. Such a view of content would imply names having both meaning and sense (probably in a Fregean manner). Wittgenstein's account of picturing by elementary propositions does not imply intermediaries. This view has been succinctly put by Rush Rhees:

"What is the point in talking about picturing, unless it is to emphasise that you can say what is a fact and not something else which corresponds to it? The only 'something else' is the propositional sign - not the sense. And the sign is not what is said - it is not what may be true or false - it is what 'says'. It says what it does because it is the sign that it is. This is the 'picture theory'" (1970, p.11).

16. The distinction between form and content made in 3.13 and the claim that the proposition contains its form by virtue of what it represents, may be seen in the light of what 2.025 says to be the substance of the world; "form and content", i.e., the objects which compose it. Substance as 'form', as the form of objects, is the form of reality, what language shares with reality and 'absorbs' from it. That is, 'form' is absorbable, content is not. Form is the aspect of the 'what' or substance of reality which is contained in language. If both form and content were contained in language, language and reality would be one and the same, and representation impossible.

17. There is another point in Griffin's comments that deserves attention. If a Satz does not have a sense because it contains dummy names, when is it given a sense? The answer put forward: "when its names are used referringly" (p.131). When its dummy names are correlated with actual objects and so replaced by actual names. If our interpretation of this process of replacement is correct, dummy names become real names in the process of a correlation between the Satz and the things outside it.

Again, we must be relying on actualities, i.e., actual combinations of objects which we must refer to in order to turn dummy names into names with meaning. If this is so, the sense of the proposition whose dummy names are replaced by actual names must be dependent on the fact to which it is correlated. That is, the sense of that proposition would depend on knowing actualities. If so, the sense of some propositions would depend on the truth of other propositions which express the meaning of names.

The correlations, of course, must be external, implying not only the priority of knowledge of actualities over possibilities but also the independence of logic from the world. That is to say, if a Satz is capable of fitting the form of actual names which may come to refill its dummy names then that form is independent and not given by the names as such. If this is the case then a Satz could have a form and structure independent of actual propositions. Then there would be logical propositions, or a logic of an ideal language which could match the language we speak as a matter of coincidence. Also, by allowing significance to a logical symbolism independent of, and not based upon, actual empirical propositions one allows the detachment of logic from the world.

III. A Central Aspect of the Unity of Wittgenstein's Philosophy: The Internality of the Picturing Relation

18. A proposition can represent reality independently of truth and falsity by virtue of its form, because it is by virtue of its form that it is internally or essentially related to the reality it represents. This

may be regarded as the principle constituting the very heart of the picture theory. It is a principle which supports the idea that sense does not presuppose truth which has a continuity within Wittgenstein's entire philosophy.

19. It has been claimed by A. Kenny that it is a mistake to over-estimate Wittgenstein's change of mind as regards the picture theory in his later work. Kenny maintains that important elements of the picture theory

"survived with more or less modification the abandonment of the atomism of the Tractatus" (1974, p.11).

This issue is still a controversial one⁽¹⁾. G. Baker and P. Hacker in their 'Critical Notice' to Wittgenstein's Philosophical Grammar maintain that

"without the atomism there is no picture theory of the proposition, but only the problem of the pictoriality of the proposition" (p.281).

It is in fact difficult to delimit the "more or less modification" that the theory had to undergo or the 'common content' that the theory had before and after. Nevertheless there is no doubt, as Kenny argues, that the principle that what gives a proposition sense must be independent of what gives it truth, (which here had been extended to the principle 'sense does not presuppose truth') is what the picture theory attempts to explain. In doing so it establishes in what must lie the internal connection between picture and pictured. It is in this internal connection that the essence of the pictoriality of the proposition consists. In this perspective Kenny's and Baker-Hacker's views need not be considered antagonistic but complementary.

20. The thesis of the determinacy of sense (3.23) and the thesis that sense does not presuppose truth (2.22), that is, that a proposition's

having sense, means it is contingently true or false, may be taken as the two corner stones of the theory of representation in the Tractatus. Due attention has been given to the first thesis and its implications. But it appears that the importance of the second has been somehow overlooked and not enough emphasis has been given to the rôle it plays in the Tractarian semantics - and consequently in the ontology too. It was the first thesis, that of the determinacy of sense, which had to be abandoned with the repudiation of atomism, while the second may be seen to run as a continuous thread from the early 'Notes on Logic' even to the later notes On Certainty as G.H. von Wright has pointed out (1972, pp.54-56). In what follows some references will be made to Wittgenstein's Philosophical Remarks in order to show the importance that the priority of sense - or of form - has in this work for the picturing relation and its similarities with the Tractatus. The connection of this issue in the two works may clearly be seen to point to further developments of the picturing relation (sense-reality relation) in later writings.

21. Tractatus 4.01 says that "A proposition is a picture of reality. A proposition is a model of reality as we imagine it", (i.e., as we imagine reality", Wittgenstein comments to Ogden (LO, p.25)). The proposition is a model of something that may or may not obtain in reality, but something possible that can obtain. To be a model of reality according to the Tractatus is to picture in 'advance' before the picture is verified to be true or false or compared with reality. The model shows only that the combination it presents can obtain and asserts that it does obtain. For a proposition to be bipolar or to have a sense is to be a model of a picture.

22. Here the conditions that a proposition has to fulfil as a model are conditions of sense, i.e., conditions that make representation possible.

Those conditions are necessary for a proposition to agree or disagree with reality. We have seen that what the proposition says is its sense (form and content) but 'says' it by means of its having the form of that sense. Form is what is shared - so, it is by form that the model 'anticipates' the situation it represents. But if anything is anticipated there must be a relation between what anticipates and what is anticipated. If such a relation does not exist, what would guarantee that the anticipation may correspond to anything, be a model or a possible occurrence in reality? Without such a connection Wittgenstein remarks "reality could take us by surprise" and also - in some-what anti-Russellian terms - "you could expect a nonsense" (PR,33). The picture or model that anticipates a fact must have something in common with it, they both must 'share space' he says;

"If I say 'I can make you a sketch of that any time you like' then that presupposes that I am in the same space as the business involved" (PR,34).

Sharing space, means sharing possibilities which Wittgenstein calls logical form also in this work (52). Perhaps a crucial passage reminiscent of the Tractatus which states this essential relation as the basis of 'foundation' of picturing or modelling - the relation that a proposition must have to reality by virtue of its sense - is this:

"Our expectation anticipates the event. In this sense, it makes a model of the event. But we can only make a model of a fact in the world we live in, i.e., the model must be essentially related to the world we live in and what's more, independently of whether it is true or false. If I say that the representation must treat of my world, then you cannot say 'since otherwise I could not verify it' but 'since otherwise it wouldn't even begin to make sense to me'" (PR,34).

It is the essential connection that accounts for 'making sense' as a precondition of verification. In the Tractatus this essential connection ultimately lies in the names being representatives of objects, sharing

their possibilities of combination or their form. This is the 'formal correlation' or also the 'representativeness' relation that is presupposed in the understanding of any proposition - for to understand a proposition is to understand its constituents. Thus, the essential or internal relation between language and reality occurs via its elements, and therefore via knowing their meanings, i.e., the objects they stand for. This is the manner in which Wittgenstein himself interprets the essential relation in the Tractatus, for he says in the Philosophical Remarks:

"Expecting is connected with looking for: looking for something presupposes that I know what I am looking for, without what I am looking for having to exist. Earlier I would have put this by saying that searching presupposes the elements of the complex, but not the combination that I was looking for. And that isn't a bad image: for, in the case of language, that would be expressed by saying that the sense of a proposition only presupposes the grammatically correct use of certain words" (PR, 28).

23. What is presupposed for the account of sense in the Tractatus, as 4.024 says, is the elements, i.e., objects with possibilities of combination and names being their representatives. Those possibilities are shown in the rules of grammar, so that to know the meaning of names is to know those rules. To know the grammar, is to know the language. In Philosophical Remarks Wittgenstein has already shifted the notion of the 'necessary existence' of simple objects to language. Nevertheless we still have to talk about the world "no matter what may be the case" (PR, 36; also 45). This is what makes possible the fact that we can look for something in reality without what we are looking for having to exist, i.e., the combination, not the elements that make the combination possible. Although the pictures of the Tractatus are not pictures made by 'intention' the ones of the Philosophical Remarks are. Nevertheless Wittgenstein says:

"what is essential to intention is the picture: the picture is what is intended"(PR,21).

Of both kinds of pictures something common could be said:

24. (i) The picture anticipates the situation, the event; in Tractarian terms it represents a possible fact. It anticipates it because it is a model of it.

(ii) Hence the model must be related to the world it anticipates, for if that were not the case we would not have 'a model...' 'a picture of...' and comparison or agreement with the world would not be possible. So the conditions that make the anticipation possible is the world presupposed if a proposition is to make sense, i.e., if it is to be a model. Hence the model guarantees the possibility of the actual occurrence of what it anticipates.

(iii) The essential relation that a model must have to the world (in order to be a model) is the precondition for the sentence to make sense, but the proposition though having to be related to the world in order to make sense, is at the same time independent of what is actually the case in the world. That is, it makes sense independently of its truth and falsity, i.e., of whether what the model presents actually occurs in the world or not.

(iv) The presupposed world is then not the world which is actually the case, the world of the actual occurrences, for the model makes sense "no matter what may be the case"(PR,36). It is rather the world contained and underlying those occurrences, the world of possibilities. It is "the form of our world" which sets the limits to what can be said; we "never give it a thought and it's impossible we should, since there is nothing that contrasts with the form of our world"(PR,47). But it is this form presupposed, contained and shared by language which permits saying something either-true-or-false - and so permits comparison or verification⁽²⁾.

(v) So language and the world have their meeting point, their essential connection in sense, i.e., in the form of language which is also the form of the world: its possibilities. So that the possibilities envisaged by the language are all the possibilities there are. In the Tractatus these possibilities are determined by the fixed possibilities of objects and 'absorbed' by names. Later these possibilities are relative to intention which make pictures into different kinds. But the meeting point between world and language is one and the same, namely, the form of language. For this reason what Wittgenstein says in Zettel 55, may be seen to hold for the whole of his philosophy:

"Like everything metaphysical the harmony between thought and reality is to be found in the grammar of the language".

25. It cannot be seen as an accident, surely, that "possibilities of combination", i.e., the grammatical possibilities of the usage of expressions, and the rôle they play in the language, are in the Tractatus relative to the form of the world, in Philosophical Remarks to the form of our world and later to the forms of life. When a new point of view intrudes with the notion of 'intention' in the Philosophical Remarks the account of sense takes a new direction. But the guiding principle in this direction is always one and the same, 'sense must be independent of truth value', so that what makes sense possible must be 'possibilities' not actualities, the possibilities that grammar permits, ultimately founded on 'our agreement on judgements'. And it is those possibilities which set the limits of what can be said and so the limits of the world.

"So you are saying that human agreement decides what is true and what is false ?' - It is what human beings say that is true and false; and they agree in the language they use. That is not agreement in opinions but in form of life" (PI, I, 241).

IV. Isomorphism and the Vagueness of Ordinary Language

26. It was claimed in the first chapter that Russell and Wittgenstein by sharing the isomorphic assumption, shared the view that language represents reality in an isomorphic manner. But do they mean by 'language' 'ordinary language' or an 'ideal language?' It is well known that Wittgenstein meant 'ordinary language' while Russell thought that only an 'ideal language' could adequately represent reality.

27. The root of this difference between the two philosophers ultimately lies in their different attitude towards ordinary language as such. There is no doubt that this attitude remains constant in Russell and Wittgenstein throughout their philosophical careers. With equal certainty it can be claimed that they are totally opposed. At first sight this may not appear to be the case, for it is well known that the 'Notes on Logic' dictum

"Distrust of grammar is the first requisite for philosophising"
(p.93).

expresses a belief that both philosophers held. But while for Wittgenstein 'distrust of grammar' was never 'distrust of ordinary language', for Russell it was so. Even in 1944 in a reply to criticisms Russell says:

"I remain convinced that obstinate addiction to ordinary language in our private thoughts is one of the main obstacles to progress in philosophy" (RC, p.694â).

Why should this be so? Ordinary language is not in order as it is, and the main reason why Russell thinks so is that language is inherently vague.

There are many passages in which Russell speaks of this vagueness in a non-technical fashion throughout his writings. In 'On the Nature of Acquaintance', one of the published chapters of his 1913 Epistemology, Russell says:

"The meaning of common words are vague, fluctuating and ambiguous, like the shadow thrown by a flickering street-lamp on a windy night; yet in the nucleus of this uncertain patch of meaning, we may find some precise concept for which philosophy requires a name"(p.128).

In the same vein in 'The Philosophy of Logical Atomism' he says:

"The process of sound philosophizing, to my mind, consists mainly in passing from those obvious, vague, ambiguous things, that we feel quite sure of, to something precise, clear, definite, which by reflection and analysis we find is involved in the vague thing that we start from, and is, so to speak, the real truth of which that vague thing is sort of shadow"(p.179-80).

Analysis can get at the 'real truth' or the 'real concept' that lies hidden. This appears to suggest that by the process of analysis the vagueness or ambiguity of ordinary language could be eradicated. So an analysed language would correspond to the structure of the world in an accurate manner. When Russell deals technically with the concept of vagueness, as we shall presently see, he says that ordinary language cannot become such an analysed language because its vagueness cannot be eradicated. That is why the ideal language has to be seen as a reconstruction or substitution of the grammar of ordinary language.

28. Wittgenstein did not think that the ideal language was such a reconstruction, for language (he always maintained) is in order as it is.

He says in the early Notebooks:

"The propositions which are the only ones that humanity uses will have a sense just as they are and do not wait upon future analysis in order to acquire a sense"(17.6.15).

Here Wittgenstein expresses what might be called his respect for ordinary language, i.e., his conviction that ordinary language must be correct, for that is all we actually have. Precisely because of this respect the Tractatus attempts to show that the proposition of ordinary language must be in order even under the straight-jacket of determinacy of sense. In a

comment in connection with TLP, 5.5563 made to Ogden, Wittgenstein says:

"I meant to say that the propositions of our ordinary language are not in any way logically less correct or less exact or more confused than propositions written down, say, in Russell's symbolism or any other 'Begriffsschrift'" (LO, p.50).

Perhaps one of the clearest statements, made in the same Tractarian spirit, as to how the ordinary propositions 'are in order' and how analysis does not bring about that order, occurs in the Philosophical Remarks:

"How strange if logic were concerned with an 'ideal' language and not with ours. For what would this ideal language express? Presumably, what we now express in our ordinary language; in that case, this is the language logic must investigate. Or something else: but in that case how would I have any idea what that would be? - Logical analysis is analysis of something we have, not of something we don't have. Therefore it is the analysis of propositions as they stand. (It would be odd if the human race had been speaking all this time without ever putting together a genuine proposition)" (3; see also 158).

Grammar does not appear clear to us in our ordinary expressions because, as the Tractatus suggests, the same sign may be expressing different symbols. A clear case in point is the sign 'is' which appears to be the same in quite different rôles, and so it stands for different symbols, i.e., in expressions of equality such as 'twice two is four', or existence such as 'there is no God', or of predication when 'is' is a copula as in 'the rose is red'. What analysis does is to exhibit the proper symbol and then, by an adequate symbolism in which each symbol is represented by a different sign, the grammar of language would be revealed. This symbolism may be called an 'ideal language' but again, as Wittgenstein points out, 'It is wrong to say that in philosophy we consider an ideal language as opposed to our ordinary one'. We may recall that this was Russell's view even in 1944. Wittgenstein continues:

"For this makes it appear as though we thought we could improve on ordinary language. But ordinary language is all right. Whenever we make up 'ideal languages' it is

not in order to replace our ordinary language by them; but just to remove some trouble caused in someone's mind thinking that he has got hold of the exact use of a common word" (BB,p.28).

In the same spirit as in the Tractatus, he says that what the ideal language exhibits is the 'order' that is already there in ordinary language. It is true that the early order was seen to be exact and determinate, later the order involves flexibility and openness. But in both cases the function of the ideal language is one and the same, supported by the same assumption too: ordinary language is in order as it is. What varies is Wittgenstein's conception concerning in what that order consists. That is why in the Tractatus a 'Begriffsschrift' is required to reveal that order, whereas later new methods are employed. Wittgenstein continues the passage from the Blue Book quoted above as follows:

"That is also why our method is not merely to enumerate actual usages of words, but rather deliberately to invent new ones, some of them because of their absurd appearance".

It is well known that these are views consistent with those of the Investigations (e.g., I.98).

29. It is now commonly agreed that the Tractatus is not concerned with an 'ideal' language, though the issue has been controversial since Russell first said it was so concerned, and Ramsey disagreed. But what is not yet clear is the precise reason for the way Russell and Ramsey thought, and the precise nature of the disagreement between Russell and Wittgenstein in the matter. In his 'Critical Notice' of Wittgenstein's Tractatus Ramsey says that it seems to be a very doubtful generalisation to claim - as Russell does in his 'Introduction' to the book - that the problem with which Wittgenstein is concerned is 'the conditions' that would have to be fulfilled by a logically perfect language (cf. 1931, p.270).

Ramsey wonders at the possible sources giving rise to this interpretation

of Russell's. He claims that Russell may have been misled by the discussion of 'logical syntax', i.e., the accurate symbolism or 'ideal language' revealing logical form, (3.325 ff). Nevertheless Ramsey sees that other parts of the book suggest the contrary (e.g., 4.002 ff). In the end he does not offer any definite answer as to why Russell may have been misled, and adds that we cannot take him as "an infallible guide to Mr. Wittgenstein's meaning" (Ibid.).

In what follows an attempt is made to give the answer which Ramsey sought. Our main contention is that disagreement between Russell and Wittgenstein as to the main concern of the Tractatus is based - among other things - upon their difference of opinion concerning the vagueness of ordinary language and where definite meaning is to be found. This contention will be supported by what Russell says in the 'Introduction' and in his article on 'Vagueness'.

30. The thesis that vagueness is an all pervasive feature of ordinary language is put forward by Russell in the 'Introduction' in the following terms:

"Language is always more or less vague, so that what we assert is never quite precise" (p.x).

The thesis here is simply stated, as he has done on other occasions. This is only an indication of the importance that Russell concedes to the thesis. The first time, as we may recall, that Russell speaks of vagueness in a technical sense is in his 1913 Epistemology (see above p.28). But as with many other doctrines contained in the Manuscript this one is anticipated and discussed in The Problems of Philosophy as a problem that the "continuous gradation" of phenomena presents (PP, pp.79-81). From this time onwards Russell has various remarks emphasising the importance of vagueness, such as this one of 1918: "I want a precise theory of the nature of

vagueness" (Clark, 1975, p. 432)⁽³⁾ .

Also in 'The Philosophy of

Logical Atomism' he says:

"I think vagueness is very much more important in theory of knowledge than you would judge it to be from the writings of most people" (p. 180).

The problem is still discussed in his later works (e.g., HKSL, pp. 147, 260-261), but his views then are essentially the same as the early ones. These he succinctly expresses in his article on 'Vagueness' of 1922, written just after he visited Wittgenstein in Innsbruck in the autumn of that year. In the paper Russell attempts "to prove" that all language is ineradicably vague. His views here are consistent with, and support, those underlying his short statement in the 'Introduction'. The connection between this article and the 'Introduction' is not only interesting for historical reasons, but more importantly because it appears to shed light on Russell's and Wittgenstein's divergent views concerning the relationship between ordinary language and logical syntax, or 'the ideal language' and so of Russell's interpretation of Wittgenstein's work.

31. Some historical facts are worth recalling now concerning the 'Introduction'. Russell originally wrote it in 1920 and it was published in German with Wittgenstein's 'Logisch-philosophische^{op} Abhandlung' in Ostwald's Annalen,⁽⁴⁾. In that version of the 'Introduction' the topic of vagueness is not explicitly mentioned. The 'Introduction' as it appears in the first English edition of the Tractatus is dated May 1922. It was for this edition that Russell made various revisions and considered it appropriate to add a full page at the beginning following C.K. Ogden's suggestions (LO, p. 7). In this page Russell after introducing the various questions about the nature of language then specifies the conditions that a logically perfect language must fulfil. It is here that the vagueness of ordinary language is mentioned.

32. In this page added in 1922, which amounts to the twenty lines of the third paragraph of the 'English Introduction', Russell claims three times that Wittgenstein is concerned with the conditions for a "logically perfect language" (lines 4-5,18,28). The corresponding paragraph to these twenty lines in the German version is a short one in which this claim is not explicitly made. It runs:

"The Principles of Symbolism will be perhaps better understood, according to Wittgenstein, if we postulate the existence of a logically perfect language. Not that any language is logically perfect, but that the whole function of language is to mean something, and it only fulfils this function in proportion as it approaches to the ideal that we postulate"(5).

By the Principles of Symbolism Russell means the principles concerning "the relations which are necessary between words and things in any language" (I,p.ix), or "The relation between what means and what is meant"(V,p.84). For him this appears to be a question of epistemology, as he declares in the third paragraph of the 'Introduction'. Nevertheless in the same paragraph he says that Wittgenstein is concerned with a 'logical' question, namely, the relation that one fact must have to another in order to be capable of being a symbol for that other. We saw that Russell interpreted Wittgenstein's account of this relation in terms of the thesis of the identity of structure between the two facts. His 'Introduction' does not enter into the precise nature of this relation but the fact that Russell does not draw a clear line between what he considers to be a logical question and an epistemological question may be taken as symptomatic of his outlook concerning the inseparability of epistemological and semantic considerations. Such was not, at this stage, Wittgenstein's outlook. And this difference in perspective between the two is closely connected with their divergent views about the nature of vagueness, which, for Russell, has a primarily epistemological foundation, as his article indicates and as we shall presently argue. Consequently, it is only natural that their views also

differ as to the nature and rôle of the accurate symbolism and its relation to ordinary language.

33. In the third short paragraph of the German version of the 'Introduction' Russell states two theses:

- (i) Only an ideal language fulfils the conditions for accurate meaning.
- (ii) Thus, the ideal logically perfect language is postulated as the model to which any other language must approximate.

To clarify these theses Russell specifies, in the twenty lines added in 1922, the conditions that such an ideal language has to possess, namely, (a) rules of syntax to prevent nonsense, and (b) symbols with a definite and unique meaning. That is to say, conditions for what Russell in other places characterises as syntax and vocabulary. Let us consider them in turn in connection with Wittgenstein's own views.

34. As regards logical syntax, ordinary language is not a safe guide for Russell, since it conceals the true logical form of the proposition. With this Wittgenstein agreed:

"It was Russell who performed the service of showing that the apparent logical form of a proposition need not be its real one" (TLP, 4.0031).

In this sense the dictum "distrust of grammar" is common to both, for both claim also that many philosophical problems arise "out of ignorance of the principles of symbolism and out of misuse of language" (I, p. ix; also V, p. 84; Preface TLP, p. 3). Philosophy for Russell attempts to reveal the structure of the world, and can do so by means of an accurate symbolism which represents it precisely. This symbolism, or ideal language, will enable us to discern "what sort of structure we may reasonably suppose the world to have" (LA, p. 338). "By studying the principles of symbolism", Russell argues,

"we can learn not to be unconsciously influenced by language, and in this way we can escape a host of erroneous notions" (V, p. 84).

All the inadequacies and obscurities of natural language will be cleared up in an accurate symbolism so that "a perfect notation would be a substitute for thought" (I, p. xvii). The primary purpose that Russell sees in his quest for logical form is an ontological one as A.J. Ayer has noted. For, as we may recall, the purpose of discovering new forms was to discover new facts in the world and the new elements that constitute them. However, the purpose according to Wittgenstein, was not to discover 'new forms' so as to make "an inventory", but rather to exhibit these forms which are already contained in language.

That is why for Wittgenstein philosophy is an activity. So, it is clear that there is no difference of opinion between Russell and Wittgenstein as regards the fundamental function of logical syntax or the ideal language, namely, that of revealing logical form and avoiding grammatical confusion. But still there is disagreement as to the rôle the ideal language plays in philosophy, and also the relation it has to ordinary language. Let us consider further why this is so.

35. Ordinary language, Russell argues, is not only misleading in its syntax but also in its vocabulary. For, as he suggests in the 'Introduction', the constituent symbols of its vocabulary should have a unique and definite meaning, but this is not so, for "what we assert is never quite precise". Thus, because ordinary language is vague, it is defective in respect of definiteness and uniqueness of meaning. Here Wittgenstein disagrees again.

Russell clearly states that only in an accurate symbolism does a sentence mean something quite definite. The conditions of uniqueness and definiteness in meaning are those that vagueness prevent from obtaining, i.e., in vague language the one-one relation does not hold between symbol and thing symbolised. Russell says:

"The fact that meaning is a one-many relation is the precise statement of the fact that all language is more or less vague" (V,p.90).

This is to identify vagueness with generality. Wittgenstein in the Notebooks when dealing with the sense of ordinary propositions such as 'the watch is lying on the table' also considers them to be vague due to their generality, which leaves things open. Generality carries with it 'indeterminateness' as Wittgenstein says in the Tractatus 3.24. Nevertheless Wittgenstein believes that this indeterminacy is only apparent. That is to say, the meaning of the names in ordinary propositions (propositions containing a complex name) differs from the meaning of names of elementary propositions only in so far as the correlation of name-object in the latter are explicit and in the former case tacit. In other words, whereas with the elementary propositions there appears to be an explicit one-one correspondence between symbol and symbolised, this relation is not so explicit in the unanalysed ones. This interpretation of how determinacy is also proper to the propositions of ordinary language seems to be supported by a very significant remark of Wittgenstein's in the Prototractatus (3.202111), which is omitted in the Tractatus.

For Russell there is not only the vagueness or indeterminacy proper to generality, but more importantly that vagueness which arises out of the fact that it is never clear whether words "apply to a given object or not" (LA,p.338). This latter fact is what makes it impossible to determine a definite boundary for the number of objects to which a word may refer, or for the number of facts that may verify a proposition. That is why

"every proposition that can be framed in practice has a certain degree of vagueness" (V,p.88).

If the inevitable indefinite boundary could be made definite, vagueness would in fact disappear for according to Russell the definite set of objects or facts would make the meaning of words and the truth or falsity

of propositions definite for that set (Ibid.).

The reasons why Russell thinks that vagueness is an ineradicable phenomenon in language have to do with his empiricist theory of knowledge. Language and knowledge are conceived by Russell as systems of representation, and

"Apart from representation, whether cognitive or mechanical, there can be no such thing as vagueness or precision" (V,p.85).

Russell defines representation by 'identity of structure' (V,p.89) as we saw in the first chapter. Thus, it is the structural correlation of one-one correspondence that excludes vagueness. When this correspondence does not obtain vagueness appears. The source of vagueness, Russell says, lies in the actual relation of correspondence (V,p.85), between knowledge and what is known. Let us consider now the epistemological considerations as to why this is so.

36. In 1921 Russell adopted the causal theory of meaning which underlies his treatment of the problem of vagueness in the article of 1922. This is a theory built on the model of Russell's own conception of causality in terms of the isomorphic correspondence, which may be traced back to his highly Leibnizian article of 1912 on the matter (clearly expressed also in 1919 in Introduction to Mathematical Philosophy). In 1919 Russell applies this isomorphic correspondence to the relation there must be between the thing in itself and the phenomena caused by it. He argues that some philosophers think that the phenomena are subjective, but nevertheless have objective counterparts, i.e., the things themselves. It is sometimes affirmed too, that while we can know about the structure of the phenomena we cannot know about the things in themselves. This is erroneous Russell claims (IMP,p.61). If things in themselves cause phenomena the identity of the structure between the thing and the

phenomena is ensured, for there must be a one-one relation between the two. That is, the causal relation plays the rôle of 'correlator'. In later years Russell still thought in the same terms:

"Whenever one complex structure causes another, there must be much the same structure in the cause as in the effect, as in the case of the gramophone record and the music" (HKSL, p.254).

Causality, understood in this way, is considered as having by itself a representative function, i.e., the cause mirrors the effect in its structure and so they have 'likeness' in this respect, - not necessarily resemblance. This causal one-one relation is the model in terms of which Russell conceives the 'uniqueness and definiteness' of precise meaning.

In 'Vagueness' Russell considers sensation as the source from which our knowledge of things derives but he says that:

"the knowledge that we can obtain through our sensations is not as fine-grained as the stimuli to those sensations" (V, p.87).

Hence, he argues, we must regard knowledge derived from senses as vague. There is not a one-one correspondence between stimuli and sensations.

Russell adds:

"And the vagueness of the knowledge derived from the senses, infects all words in the definition of which there is a sensible element" (Ibid.).

He includes in this class words for qualities, quantities and proper names. The words which are excluded are logical words. But in the end he says they are also infected since they have to do with notions such as 'true' and 'false'. These notions can never be precise because they derive their meaning from propositions which cannot be precise since their constituents are vague. So, Russell concludes that all knowledge and all language is vague. This vagueness is "merely a particular case of a general law of physics":

"I think all vagueness in language and thought is essentially analogous to this vagueness that may exist in a photograph. my own belief is that most of the problems of epistemology,

in so far as they are genuine, are really problems of physics and physiology" (V, pp. 91-92).

37. In the 'Introduction' to the Tractatus Russell has regarded an accurate symbolism, i.e., that which could avoid the imprecision proper to ordinary language, as a 'postulated ideal'. He is not there concerned with its actual construction: "not that we believe ourselves capable, here and now, of constructing a logically perfect language..." What really matters is the conditions that such language must fulfil in order to attain the ideal. These remarks make clear that Russell brings the theme of the vagueness of ordinary language into the 'Introduction' in order to justify the need for the postulation of the ideal language. Such justification is needed once the Principles of Symbolism are taken to be concerned with the conditions for accurate meaning, as Russell takes them. For if a symbolism is to attain accurate representation, it can only do so when its symbols have a definite and unique meaning.

It is clear from this perspective that Russell was compelled to claim that if Wittgenstein was concerned with logical syntax, or logical form, or with what had to be the case about language and reality, so that one was capable of representing the other - as Wittgenstein obviously was - , he must have been concerned with the conditions for accurate meaning, i.e., with the conditions for a logically perfect language.

38. It is well known that Wittgenstein disagreed with this conclusion⁽⁶⁾. The reasons he explicitly expressed are well summed up in the comment made to Ogden on 10th May 1922 in connection with 5.5563 referred to above. It is now helpful to quote it in full:

"...'logically completely ordered'. By this I meant to say that the propositions of our ordinary language are not in any way logically less correct or less exact or more confused than propositions written down, say, in Russell's symbolism or

any other 'Begriffsschrift'. (Only it is easier for us to gather their logical form when they are expressed in an appropriate symbolism("LO,p.50).

These views are a clear indication that Wittgenstein regards an appropriate symbolism as a useful means or a practical measure to display logical form or to lay logical syntax open to view. However, the status of propositions in an appropriate symbolism is not more privileged than the status of propositions in ordinary language, for logical syntax is characteristic of them both. That is why Wittgenstein could not regard the symbolism of Principia Mathematica as Russell himself did:

"I invented a special language with a view to avoiding vagueness"(V,p.84 ;cf.PLA,p.198).

This was Russell's ideal. Hence while for Wittgenstein 'the ideal' was present everywhere in all languages, for Russell it could not be found anywhere; it remained an ideal and unattainable.

Now it becomes clear why Wittgenstein had to disagree with Russell's views even as expressed in the short paragraph of the early version of the 'Introduction' where vagueness was not mentioned. There, it was argued for the convenience of postulating a logically perfect language in order to understand better the principles of symbolism. In this light the contention does not seem to be a blunt misunderstanding of Wittgenstein's views. But Russell's explanatory theses which follow in that same paragraph, supporting the first claim, were never held by Wittgenstein, namely, (a) that no language is logically perfect, and (b) that the conditions for accurate meaning are not to be found in ordinary language. What Russell adds in 1922 is complementary to his earlier version: the conditions for accurate meaning are not to be found in ordinary language for it is vague.

For Wittgenstein in the Tractatus definiteness of sense is a requirement of language as language, i.e., as a system of representation

of reality. The unclarities and possible logical confusions can be eradicated. The unclarities that occur belong to the surface of language, to its appearance, but they do not touch its reality, which is hidden behind the appearances (4.002). For Russell on the other hand, vagueness is a deep phenomenon in language. It cannot be eradicated in any way. Ordinary language is condemned to be vague. It can never be refined in such a way as to achieve definiteness of sense, i.e., the one-one correspondence between words and their meanings. Ordinary language is not isomorphic with reality so it does not disclose the structure of reality, so it cannot be an accurate representation of reality.

For both Russell and Wittgenstein, determinacy of meaning is a condition for adequate representation. Russell's insistence on the one-one correspondence is a way of formulating this requirement. But while for Wittgenstein this requirement is a requirement of any language, for Russell it can only be found in an ideal language. He even goes as far as to claim that an ideal language, a logical symbolism, suffers from vagueness in so far as it is attached to ordinary language, as he thinks it must be:

"We can see an ideal of precision, to which we can approximate indefinitely; but we cannot attain this ideal...We are capable of imagining what a precise symbolism would be, though we cannot actually construct such a symbolism" (V,p.88).

To this it could be retorted using Wittgenstein's words in Philosophical Remarks: "If I cannot see an exact circle then in this sense neither can I see approximations to one" (212).

39. Wittgenstein in the Tractatus did not question whether ordinary language did, or did not, adequately represent reality. It was his starting point that language as language represents reality. Thus his attempt was to establish what had to be the case for language to say

something about the world, granted that it did. Russell on the other hand, from empiricist epistemological considerations, questioned what could be known about the world, how that knowledge was possible, and how accurate it could be. In this search vagueness appeared as an insurmountable obstacle. It forced him to maintain that all language was infected with vagueness, and that the ideal of precision, i.e., the logically perfect language, was in practice unattainable. Thus, Russell's position leads to the conclusion that we must remain content with our incapacity to reach the ideal, and so with our desire to know the structure of the world not being fully satisfied.

CONCLUSION

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1. Russell and Wittgenstein are both logicians whose ultimate concerns are philosophical. Perhaps the overall aim of their enquiries can be viewed as an attempt to build philosophy upon logic, which involves the working out of a theory of the proposition. In such an attempt the notion of form plays a fundamental role. The interaction of Russell's and Wittgenstein's ideas, in the period with which we are concerned, can be seen to centre on this question of form, of logical form. We have taken Epistemology as the work in which Russell focuses on this question as a central one. The Tractatus account of form, which involves the important 'form/structure' distinction, is Wittgenstein's alternative to Russell's views in Epistemology. It is upon the characterisation of form that the philosophical account of the various problems which preoccupy them depends: the isomorphic representative capacity of language, the relationship between logic and reality or between logical propositions and empirical propositions, the priority of meaning over truth, and ultimately the relationship between language and reality.

2. Russell and Wittgenstein differ as to how they 'base' philosophy upon logic, and as to how they conceive of their relationship. For Russell philosophy is reducible to logic, or, as he says, logic is the essence of philosophy. This reducibility is what the Russellian term "philosophical logic" expresses. Logic provides us with a variety of forms by means of which philosophical problems may be explained. It is possible to consider philosophy as a 'scientific' enterprise because philosophical doctrines can take 'forms' as the 'suggested hypotheses' which reveal the structure of reality and can ultimately be measured against

reality and evaluated as true or false. For Wittgenstein, on the other hand, the reducibility of philosophy to logic is a misconception of both logic and philosophy - he once said he could not make sense of the term "philosophical logic". Philosophy is not a body of doctrines - of hypotheses it cannot be 'scientific'. It is an activity which in disclosing the logic of our language discloses "the essence of the world". Such a disclosure makes us aware that logical form is something that cannot be said and sets the limits of what can be said. That is why logic is transcendental.

3. Russell's overall conception of form does not involve the technical distinction 'form/structure'. These two terms are equivalent for Russell. He believes that there is a variety of logical forms. Some of these - the primitive ones - are 'logical objects' expressed by logical propositions. Logical objects are known by means of logical acquaintance or logical experience. Hence, our knowledge of those objects has the quality of unquestionable certainty. It is 'true knowledge' guaranteed to be so on grounds of self-evidence. Knowledge of logical forms is a prior and necessary condition for an understanding of ordinary propositions, those propositions which are composed of two kinds of independent elements: constituents and forms. Thus empirical knowledge, or knowledge of empirical propositions, ultimately depends on logical knowledge or knowledge of logical propositions. To these two kinds of knowledge correspond two kinds of ontological worlds: the a priori and the empirical. These two worlds are independent of each other. This makes it possible that there could be a logic even if there was no empirical world. The duality constituted by the two worlds cannot be resolved. The kind of match that these two worlds have is not explained

by Russell; it is unquestionably accepted as given.

4. Thus Russell's position could be summarised in the following points:

(i) Knowledge is founded on experience. The priority of experience lies at the basis of all our knowledge, either a priori or empirical, of what there is. Experience is confrontation with what is actual, which is therefore ultimately primary.

(ii) The a priori world and the empirical world constitute a dual irreducible ontological reality.

(iii) Although the two worlds are independent of each other and externally related, nevertheless they match.

(iv) Forms belong to the a priori world. They are logical objects. They are conceived in syntactical terms, i.e., they are the very syntactical combinations. They are expressed in logical propositions, which are propositions with no constituents. Knowledge of them is a logical precondition of our understanding of ordinary propositions and so of empirical knowledge.

5. Wittgenstein's Tractarian doctrines abolish Russell's two-world theory. There is only one world: the empirical reality of which ordinary propositions talk about. But there is a depth to this reality. The dualities - dual distinctions - that appear in Wittgenstein's doctrine are expressions of the two aspects of one and the same world: facts and that which lies beyond the facts as its ground, i.e., its substance. The substance of the world is its form, the ground constituted by possibilities. This is what is prior; this is what it is necessary to be aware of in order to understand the logic of our language. But this awareness is not a kind of experience which yields a truth. It is rather the condition of every experience; it is a mystical felt awareness of the

'What' of the world. This is 'the Mystical', what cannot be said.

'What is' is shown in what is said. The form of the world is shared by language, and shown in it. The logical form that a logical syntax reveals is the form of the world: the possibilities inherent in the objects of the world which are 'absorbed' by the constituents of language, i.e., its names. Names and objects share form. That is why form, according to Wittgenstein and in contrast with Russell's views, is ultimately a semantic-ontological notion; on it depends all syntactical characterisation.

6. We have already presented Russell's position under four headings; Wittgenstein's may be presented in parallel as follows:

(i) What is prior and ultimate is not experience, the knowledge of 'how things are', i.e., the facts. It is rather the condition of every experience: 'what things are' which cannot be expressed in proposition, but sets their limits. It is the ground of possibilities presupposed by propositions: the form of the world or its substance. This cannot be said. It is only shown. It constitutes what is the Mystical.

(ii) There are not two worlds: the a priori and the empirical. There is only one world whose factuality and contingency, i.e., what can exist or cannot exist, is expressed in propositions. The factuality of the world is underlied by its substance, i.e., its form or possibilities, which lie beyond existence-and-non-existence.

(iii) Since there are not two worlds, and since logical forms do not belong to a Platonic a priori one, then logic cannot be regarded as something independent of the world. Logical form is the form of the world. So the form of the world is contained in language. That is why language and the world are "essentially" or internally related.

The isomorphic structural correspondence which the propositions of language have with the facts of the world can only be accounted for because form is the possibility of structure. The form/structure distinction explains the internal connection between language and the world, and so the priority of sense over truth. Russell did not require such a distinction because for him there was not such an internal connection.

(iv) The Tractarian conception of form is not primarily syntactical. It is not an 'object' either, but rather the form of the world absorbed by language and so inherent in the semantics of its constituent names. It is what makes the syntactical combinations possible. Syntax, then, is dependent on semantics.

7. Russell's misunderstanding of Wittgenstein's main concern in the Tractatus emerges from at least two sources: his views on form and his views on the vagueness of ordinary language. In both respects he differs from Wittgenstein. As regards the vagueness of ordinary language we have seen that Russell maintains that ordinary language is inherently vague. Definiteness of sense - as the prerequisite of accurate representation - cannot be found in ordinary language. That 'sense must be determinate' can only be an 'ideal' for Russell since the one-one correspondence that determinacy requires cannot in principle be a quality of ordinary language. Wittgenstein claims that as ordinary language represents reality it must then be an accurate means of representation. Hence determinacy of sense must belong in principle to it. Definiteness of sense is not an 'ideal', it is rather the hidden property of language which makes it an accurate means of representation. Thus, while Russell believes that definite meaning is only to be found in an ideal language, Wittgenstein thinks that it must be found in all languages. As the Tractatus is explicitly concerned with the view that sense must be

determinate, then, according to Russell, this can only be a concern about an ideal language and not about ordinary language.

8. Russell also interprets the Tractatus in the light of his own conception of structure or form. It is only if form is understood as that which cannot be said and as that which is the ground of what can be said that philosophy may be regarded as an activity and not as a 'scientific' body of hypotheses or of doctrines. The real philosophical concerns lie beyond the facts; and so beyond what can be said, beyond propositions. Only if language and the world share form, possibilities, is their relationship internal and not grounded in experience. Russell's 'scientific' attitude demands that what cannot be said must be philosophically disregarded. For Wittgenstein what can be said is not properly philosophical.

9. Wittgenstein's Tractarian doctrine that language is internally connected with the world by means of its possibilities (i.e., its form, which is what has priority and not experience) is a constant in his entire philosophy. It is a doctrine substantiating his thesis that 'sense is independent of the facts'. It justifies the priority of sense over truth, of possibilities over actualities, of form over structure, of mystical awareness over propositional knowledge. It maintains that such a priority constitutes the ground of what is grounded. Therefore, it has no grounds itself: there are no ultimate foundations justified in self-evidence. The Tractarian 'form of the world' which is the form of language - or its grammar - is in the later phase of Wittgenstein's doctrines transformed into 'forms of life'. Then the possibilities of the world are those which human beings envisage and which are contained in forms of human life. These possibilities are

not fixed and closed for human life is not closed and fixed either.

10. The present study maintains that there are two central theses in the Tractarian semantics: 'sense is independent of the facts' and 'sense is determinate'. The latter thesis was abandoned by Wittgenstein with the abandonment of logical atomism. The former thesis was never abandoned. In the different stages of his account of it lie a source of unity and continuous growth in Wittgenstein's philosophy.

NOTES

Chapter One

- (1) Cf. Philosophy of Leibniz, e.g., opening sentence in Chapter II; Perhaps it is not totally accurate to speak of 'correspondence' between proposition and fact at this stage of Russell's realism, for he maintains that propositions contain the objects of acquaintance themselves. Hence, propositions in this sense do not strictly belong to language; cf. Principles 51. Nevertheless Russell's remarks convey the distinction between symbol and symbolised and his belief in their correspondence, so that by an analysis of the symbol we would reach the structure of what is symbolised. This is a belief underlying his 'discovery' of the reality of relations and consequently of relational facts. Russell says in My Philosophical Development - what he also has repeated on other occasions: "I first realised the importance of the question of relations when I was working on Leibniz. I found - what books on Leibniz failed to make clear - that his metaphysic was explicitly based upon the doctrine that every proposition attributes a predicate to a subject and (what seemed to him almost the same thing) that every fact consists of a substance having a property" (p.48). See also note (5) below.
- (2) The notion of 'structure' is first defined by Russell as 'relation number' and explained in technical terms in Principia Mathematica Part VI (with its antecedents in The Principles). Russell usually refers to Principia in his writings in connection with this notion, e.g., in 'Logical Atomism' (1924) (LK, p.340).
- (3) The terms 'absolute atomism' and 'relative atomism' are those of D.F. Pears.[~]
- (4) Russell wrote this article just after having received from Wittgenstein the Manuscript of the 'Logisch-philosophische Abhandlung' via Keynes (cf. LR, p.69). Russell's theory seems to be a misunderstanding of Wittgenstein's notions of 'picture' and 'picturing'.
- (5) Cf. 'Recent Work in the Philosophy of Leibniz' (ed. Frankfurt 1972, p.37). After the passage quoted, Russell continues his 'one-one correspondence' interpretation of representation by explicitly bringing an arithmetical example. He says: "To take an illustration from Arithmetic: consider the various series whose general terms are respectively $1-1/\underline{n}$, $2-1/\underline{n}$, $-1/\underline{n}$, etc., where \underline{n} is to take successively all positive integral values. Each of these series is similar both to every other series and to the whole series of series. If every term of each series stood for a state of a monad, and each whole series for a whole monad, we should get here a perfect Leibnizian world, in which monads would all mirror both each other and the universe".
- (6) The question of external relations is a constant theme in Russell's work to which he attached a great deal of importance; cf. e.g., The Philosophy of Leibniz (1900), pp.13,14,130,206, etc.; The Principles of Mathematics (1930), Ch.XXVI; 'The Nature of Truth' (1907); Epistemology (1913), 170 ff.; Our Knowledge of the External World, (1914) Ch.II; 'The Philosophy of Logical Atomism' (1918) Ch.III; 'Logical Atomism' (1924); My Philosophical Development (1959), Ch.V.

(7) At the time of the Tractatus Russell still rejects Wittgenstein's views on the matter as he puts them in remark 5.5422: "The correct explanation of the form of the proposition, 'A makes the judgement P' must show that it is impossible for a judgement to be a piece of nonsense. (Russell's theory does not satisfy this requirement)". In the Engelmann Typescript of the Tractatus, kept in the Bodleian Library, on p.53 opposite remark 5.5422, there is a note in Russell's hand-writing which says: "I believe it is possible and even usual to judge nonsense".

(8) "essentially denote": I owe this way of putting the matter to D.F. Pears.

(9) Quoted by D.F. Pears in 'Russell's Theories of Memory' (1975, p.231).

Chapter Two

(1) The translation is after B.F. McGuinness, cf. his article 'Bertrand Russell and Ludwig Wittgenstein's 'Notes on Logic' (1972).

(2) The letter to Russell (January, 1913) in which Wittgenstein first distinguishes between names, on the one hand, and qualities and relations as copulae - forms - (LR, p.19), on the other, was written after a visit to Frege (cf. McGuinness, 1974, p.55). Wittgenstein's views in the letter can be taken to be a possible interpretation of the Fregean notions 'function' and 'object'.

(3) This is the point P.M.S. Hacker makes in Insight and Illusion, p.157, to be discussed later (see below pp.205ff).

(4) This is what B.F. McGuinness shows in his 1974 article.

(5) By B.F. McGuinness in his 1976 article.

(6) This interpretation connected with TLP 3.33 ff - contrary to the traditional one - will be justified later in the discussion, see below p;206ff .

(7) Cf. 'Royal Academy Lecture on Stuart Mill', 1955, p.17.

(8) It is interesting to note that Russell here, as on many other occasions, is subject to his own criticisms of others. For in Our Knowledge of the External World his reasons for rejecting Hegel's logic is that it is applied logic. Russell says: "I should not regard Hegel's reasoning, even if it were valid, as properly belonging to logic: it would rather be an application of logic to the actual world" (p.47).

(9) D.F. Pears's expression.

Chapter Three

(1) I owe this distinction between the world as 'fact' and the world as 'substance' to my friend M.T. Wolf (1973), although my interpretation does not tally with hers in some central issues.

(2) A case in point is P.M.S. Hacker's claim (1972) that "The function of objects, in the Tractatus, is to enable language to be unambiguously connected with the world" and his interpretation of this fact as that which makes possible the 'sharing of structure' between language and the world. The reasons he finds to support this view are taken from the Notebooks: "the general description of the world is like a stencil of the world, the names pin it to the world so that the world is wholly covered by it (NB,p.53)" (p.43). This is not the view in the Tractatus. There is development from the Notebooks to the Tractatus precisely in this question of the 'sharing of structure' as we shall see.

(3) After B.F. McGuinness's rendering, cf. 1974, p.61.

(4) Cf. D.F. Pears, 'The Relation between Wittgenstein's Picture Theory of the Proposition and Russell's Theories of Judgement' (1977). I am very much indebted to this article.

(5) This remark may be read with 3.13 (which will be discussed in more detail later, see below pp.185ff) where it is said that "A proposition contains the form but not the content of its sense". As the sense of the proposition is the situation it represents then the proposition can only contain the possibility of that situation, which is its form (names share the form or possibilities of objects). The propositions cannot contain the situation itself - both form and content -, i.e., the objects themselves.

(6) Pears-McGuinness Translation render the last sentence of this remark as "...but that it exists". As 'existence' is a term used more in connection with what is contingently the case - 'How things are' - I prefer to consider 'the mystical' as that which is rather than exists, since existence or non-existence does not apply to it. The world as that which is is independent of what is the case. For further comments on the Tractarian remarks on 'the mystical' see my article in Russell (1977, pp.35-36).

(7) That is to say, if the conjunction 'p.q' is true then its equivalences are also true, namely, ' $\sim(\sim p \vee \sim q)$ ', ' $\sim(p \supset \sim q)$ ', ' $\sim(p/q)$ '.

Chapter Four

(1) Kenny's views have recently been challenged by e.g., A. Ellis in 'Kenny and the Continuity of Wittgenstein's Philosophy', Mind, n.346, April, 1978. Cf. also N. Malcolm's Memory and Mind (1977, p.157) where he defends the view of a "complete rejection of the picture theory" in Wittgenstein's later work.

(2) It is widely held that Wittgenstein at this time subscribed to the principle of verification in its starkest form: 'the meaning of a proposition is its mode of verification' (cf. Kenny, 1973, p. 130). Passages from Wittgenstein und der Wiener Kreis are invoked to support this view, e.g., 47-48, 79, 244, etc.. But according to Philosophical Remarks this appears to be wrong, for sense is presupposed by the possibility of verification, as Wittgenstein explicitly states in remark 34 quoted. The matter is different concerning mathematical propositions as he says e.g., in PR, 122.

(3) This phrase is taken from a letter of Russell to his brother while Russell was in prison. He expresses in this letter his intentions of doing work in logic in the following terms: "(a) I want to tackle first the analysis of belief and shall be grateful if /Carr/ will send me any book I ought to read bearing on this. For purposes of logic, I must know whether there are atomic facts containing no verbs, such as beliefs appear to be. (b) I want to be clear as to the relation of symbolism to psychology, and generally the status, in relation to the real world, of what logic calls the "proposition". (c) I want a precise theory of the nature of vagueness. These three problems I want to solve for the sake of logic: there are others which I wrote to Carr about before, which are rather metaphysical, i.e., concern the questions 'are there specifically mental entities?' "(Clark, 1975, p. 432).

(4) Since the "Abhandlung", as published in the Annalen, has not been widely available, there are authors and commentators who do not seem to have been aware of this early version of Russell's 'Introduction'. Cf. e.g., M. Black's Companion, 1964, p. 24; Logic and Knowledge, ed. R.C. Marsh, 1956, p. 175; A. Kenny's Wittgenstein, 1973, p. 4.

(5) The German runs: "Man wird die Grundlagen der Symbolik nach Wittgenstein vielleicht leichter verstehen, wenn wir das Bestehen einer logisch vollkommenen Sprache annehmen. Nicht dass irgend eine Sprache logisch vollkommen wäre, oder dass wir selbst uns für fähig halten, jetzt und hier eine logische vollkommene Sprache herzustellen. Aber der ganze Zweck der Sprache ist, dass sie etwas bedeutet, und sie erfüllt diesen nur in dem Masse, als sie sich dem Ideal nähert, das wir annehmen".

(6) Russell refers to this disagreement in My Philosophical Development in these terms: "At one time, Wittgenstein agreed with me in thinking that a logical language would be useful in philosophy, and I attributed this view to him in the introduction which I wrote to his Tractatus Logico-Philosophicus. Unfortunately by this time, he had not only abandoned the view, but had apparently forgotten that he ever held it. What I said about it therefore appeared to him as a misrepresentation. His followers ever since have vehemently rejected the suggestion that a logical language could possibly be useful" (p. 173). It is clear that the 'usefulness' of the logical language for Wittgenstein really differed from what it was for Russell. There must have been a misunderstanding from the beginning, so that the 1922 disagreement was not due to a lapse of memory on the part of Wittgenstein. The disagreement was rooted - from the beginning - on their assumptions about the nature of ordinary language. My guess is that this disagreement must have played a central part in their conversations in the Hague in the Autumn of 1922. It was just after this visit that Russell wrote his article on vagueness to make his position clear. Also in

1923, when Wittgenstein explained the Tractatus to F.P. Ramsey in Puchberg, the topic of the ideal language and of vagueness must have been a subject of conversation. For in 1924 when Ramsey writes to Wittgenstein from Cambridge and, among other things, gives him news of Russell, he says: "I went to see Russell a few weeks ago...He indignantly denied ever having said that vagueness is a characteristic of the physical world"(LO,p.84) (Ramsey's emphasis).

APPENDIX A: Notes on Bertrand Russell's 'Epistemology'

Russell's unpublished Manuscript on Theory of Knowledge is also referred to by some commentators as Epistemology, e.g., B.F. McGuinness (1974). The latter title has been adopted in the present study. The Manuscript is comprised of 208 pages, numbered 143-350. It is kept in The Bertrand Russell Archives, McMaster University. It was 'discovered' among Russell's papers by Mr. Kenneth Blackwell, the Archivist, in the late 1960's. It is known that Russell wrote it in May and June of 1913 and intended it for publication.

The book was conceived as divided into three parts in order to account for "knowledge of terms, knowledge of atomic propositions, and knowledge of molecular propositions" (MS,191) and the basis of acquaintance underlying those kinds of knowledges. The third part on 'molecular propositions' was never written. The second part, consisting of seven chapters (see below), and the last three chapters of the first part were never published. These ten chapters constitute the unpublished Manuscript. The first six chapters of the first part are said to have been published in The Monist (I have only been able to find the first four). The first three chapters of the first part were reprinted in 1956 in Logic and Knowledge, ed. R.C. Marsh, under the heading 'On the Nature of Acquaintance'. Therefore the contents of the intended book would have been as follows:

PART I. ON THE NATURE OF ACQUAINTANCE (?) or KNOWLEDGE OF TERMS (?) (MS,191)

Chapter I	Preliminary Description of Experience	(LK,p.127)
Chapter II	Neutral Monism	(LK,p.139)
Chapter III	Analysis of Experience	(LK,p.159)
Chapter IV	Definitions and Methodological Principles in the Theory of Knowledge	(<u>The Monist</u> 1914,v.24)
Chapter V	Sensation and Imagination	(<u>The Monist</u> ?)
Chapter VI	On the Experience of Time	(<u>The Monist</u> ?)
Chapter VII	On the Acquaintance Involved in Our Knowledge of Relations	(MS,143)
Chapter VIII	Acquaintance with Predicates	(MS,166)
Chapter IX	Logical Data	(MS,181)

PART II. ATOMIC PROPOSITIONAL THOUGHT

Chapter I	The Understanding of Propositions	(MS,191)
Chapter II	Analysis and Synthesis	(MS,221)
Chapter III	Various Examples of Understanding	(MS,242)
Chapter IV	Belief, Disbelief and Doubt	(MS,260)
Chapter V	Truth and Falsehood	(MS,275)
Chapter VI	Self-Evidence	(MS,301)
Chapter VII	Degrees of Certainty	(MS,324)

PART III. MOLECULAR PROPOSITIONAL THOUGHT (never written)

Russell probably decided to begin to write this book on Epistemology prompted by his conversations with Wittgenstein. Nevertheless it was precisely because of Wittgenstein's criticisms that the book was never finished nor published. R.W. Clark in Russell's biography says that Wittgenstein "had called on Russell soon after he had started on 'Theory of Knowledge' and had voiced his disapproval. The result, Wittgenstein warned his tutor, would be exactly like the Shilling Shocker [The Problems of Philosophy] all over again. When Russell had some 225 pages of the manuscript finished...Wittgenstein called again...'We were both cross from the heat. I showed him a crucial part of what I have been writing. He said it was all wrong, not realising the difficulties - that he had tried my views and knew it would not work. I couldn't understand his objection - in fact he was very inarticulate - but I feel in my bones that he must be right, and that he has seen something I have missed. If I could see it too I shouldn't mind, but as it is, it is worrying and has rather destroyed the pleasure in my writing - I can only go on with what I see & and yet feel it is probably all wrong, & and that Wittgenstein will think me a dishonest scoundrel for going on with it. Well, well - it is the younger generation knocking at the door - I must make room for him when I can, or I shall become an incubus. But at the moment I was rather crossed" (p.252).

Wittgenstein succeeded in becoming articulate by formulating his objection clearly in a letter to Russell in June 1913 (LR,p.23). Russell must have replied soon to this letter, for on the following 22nd July Wittgenstein writes to him: "I am very sorry to hear that my objection to your theory of judgement paralyses you. I think it can only be removed by a correct theory of propositions" (LR,p.24). Three years later Russell recalls the event in a letter to Lady Ottoline in the following terms: "Do you remember that at that time...I wrote a lot of stuff about Theory of Knowledge, which Wittgenstein criticised with the greatest severity? His criticism...was an event of first-rate importance in my life, and affected everything I have done since. I saw he was right, and I saw I could not hope ever again to do fundamental work in philosophy. My impulse was shattered, like a wave dashed to pieces against a breakwater". (ABR,p.282).

In the article 'Bertrand Russell and Ludwig Wittgenstein's 'Notes on Logic'' (1972) B.F. McGuinness shows that 'Notes on Logic' were composed from August to November 1913. So it clearly establishes that 'Notes on Logic' were written after Wittgenstein had seen and criticised Russell's Manuscript in May and June. Thus 'Notes on Logic' already emerge as the first attempt at the "correct theory of propositions" to which Wittgenstein referred in his letter to Russell of June 1913. They contain fundamental criticisms of the doctrines of Russell's Epistemology. These criticisms are the seeds which will develop into a radical alternative to Russell's questions.

APPENDIX B: Notes on Russell's Introduction to Wittgenstein's 'Tractatus'

Two facts about Russell's Introduction to Wittgenstein's Tractatus have gone largely unnoticed. One is that there exist two versions of that Introduction. The other, more important, concerns the variants between the two versions.

Neither a manuscript nor a typescript of Russell's Introduction is known to be extant. In 1952 G.H. von Wright saw in Gmunden a typescript of Wittgenstein's Tractatus having attached to it a typescript of Russell's Introduction. These typescripts are missing now. Wittgenstein's 'Logisch-philosophische Abhandlung' first appeared in the final issue of Wilhem Ostwald's Annalen der Naturphilosophie in Autumn 1921. This edition contains a translation in German of Russell's Introduction which had been originally written in English. In November 1922 the 'Abhandlung' was published in England under the title Tractatus Logico-Philosophicus, edited by C.K. Ogden and published by Kegan Paul, Trench, Trubner and Co. Ltd.. In this edition Wittgenstein's text, both in German and English, was preceded by an Introduction in English by Bertrand Russell. A detailed comparison between the two versions of Russell's Introduction - the German as it appears in the Annalen, and the English of 1922 - discloses certain variants of importance. In the present study only that concerning the vagueness of ordinary language and its relation to an accurate Symbolism is considered. For other discrepancies between the two versions my paper in Russell, 1977, may be consulted.

The history of Russell's Introduction to the Tractatus begins in mid-December 1919 at the Hague where Russell and Wittgenstein met. This meeting was first proposed by Wittgenstein to Russell in a letter from the Italian prison camp dated 19th August 1919. The meeting had a two-fold purpose in view: that Russell should be enabled to understand the content of Wittgenstein's book by having it explained to him, since in his first reading he had not got hold of the main contention (LR,p.71), and that some way of having the treatise published should be found. Wittgenstein had contacted various publishers, but they did not want to take the risk of publishing a book without a sure market. He sought help from Russell: "If only you were able to come to the Hague...The difficulties with my book have started up again. No body wants to publish it. Do you remember how you were always pressing me to publish something? And now when I should like to, it can't be managed. The devil take it!" (LR,p.81). The meeting at the Hague was a successful one and enjoyed by both parties. Wittgenstein reported with optimism after the meeting: "at present the matter stands as follows: Russell wants to write an introduction to my treatise and I have declared myself in agreement with this. The introduction is intended to be half the length of the treatise itself and to elucidate the most difficult points in the work. Now, with this introduction, the book is a much smaller risk for a publisher or possibly no longer a risk at all, because Russell's name is very well known and will guarantee a quite definite public for the book. Of course, I don't mean that this will bring it into the right hands, but at any rate it will render a happy accident less out of the question" (letter to von Ficker, 28 Dec; Prototractatus,p.21).

Wittgenstein's optimism was disappointed. Firstly, when he received Russell's Introduction on 9 March 1920, he realised he had been misunderstood again: "There's so much of it that I'm not quite in agreement with - both

where you're critical of me and also where you're simply trying to elucidate my point of view. But that doesn't matter. The future will pass judgement on us - or perhaps it won't, and if it is silent that will be a judgement too. The introduction is in the course of being translated..."(LR,p.86). Secondly, the translation of the introduction into German turned out to be so bad that only "superficially and misunderstanding" appeared to have remained. "I could not bring myself to have it [the book] published with Russell's Introduction, which looks even more impossible in translation than it does in the original" wrote Wittgenstein to his friend Engelmann (LE,p.31). As all the attempts for a German publication of the book eventually fell through, Wittgenstein left everything in Russell's hands: "for the moment I won't take any further steps to have it published. But if you feel like getting it printed, it is entirely at your disposal and you can do what you like with it. (Only, if you change anything in the text, indicate that the change was made by you") (LR,p.89).

Before Russell went to China in the Autumn of 1920 he left Wittgenstein's work with Dorothy Wrinch so that she could find some means of having it published. Cambridge University Press was the first to decline the offer, probably because Wittgenstein's work had been sent without Russell's Introduction. Then three German periodicals were contacted. The editor of Annalen was the first to accept the publication, relying on the value of Russell's Introduction rather than on Wittgenstein's text (cf.Prototractatus,p.26). Typescripts of the Introduction of Wittgenstein's work were sent to Ostwald. The publishers translated the Introduction into German and Ostwald seems to have read the proofs. There is no evidence as to who read the proofs of Wittgenstein's text. What is certain is that neither Wittgenstein nor Russell did. The carelessness shown by the number of errors in this edition is so great as to make Wittgenstein call it a "piratededition".

When Russell came back from China in 1921 he agreed to the publication of Wittgenstein's work in England with C.K. Ogden. It was Ogden, apart from Russell himself, who appreciated Wittgenstein's work on its own merits. The printing of the Tractatus was carefully handled by Ogden as his correspondence with Wittgenstein shows. The original typescript of Russell's Introduction was requested from Ostwald by Ogden for the printing, but Ostwald replied that he had destroyed it when it was no longer needed. Meanwhile Russell found a spare copy which he sent to Ogden. This was in mid-November 1921. But between mid-November and May 1922 Russell must have made the alterations which the second version contains. Wittgenstein agreed to have Russell's Introduction in English printed with text, although, as F.P. Ramsey once remarked, he had somehow considered it as "a strain"(LO,p.86).

It appears as if Russell really never came to understand the views on the "cardinal problem of philosophy" as Wittgenstein puts it in the Tractatus. Nevertheless it was through Russell's efforts, patience, and sympathetic understanding of Wittgenstein's genius that the Tractatus saw the light. The content of the Introduction bears witness to the first claim, its history to the second.

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Items included in this bibliography either have been referred to in the text or found to be of relevance for this study. The works of Russell and Wittgenstein are given in chronological order with their abbreviations:

(Abbreviations)	<u>Works by B. Russell</u>	
PL	1900	<u>A Critical Exposition of the Philosophy of Leibniz</u> , Cambridge University Press.
P	1903	<u>The Principles of Mathematics</u> , Allen & Unwin, London, Second edition 1937(1972).
RWPL	1903	"Recent Work on the Philosophy of Leibniz", <u>Mind</u> , reprinted in <u>Leibniz A Collection of Critical Essays</u> , ed. G. Frankfurt, Doubleday, New York(1972).
MTCA	1904	"Meinong's Theory of Complexes and Assumptions", <u>Mind</u> , XIII.
OD	1905	"On Denoting", <u>Mind</u> , XIV, reprinted in <u>Logic and Knowledge</u> , ed. R.C. Marsh, 1956(1971).
NT	1907	"The Nature of Truth ", PAS, the first two sections reprinted as "The Monistic Theory of Truth" in <u>Philosophical Essays</u> , Longmans, London, 1910.
ONTF	1910	"On Nature of Truth and Falsehood", <u>Philosophical Essays</u> , Longmans, London, 1910.
PM	1910	<u>Principia Mathematica</u> , Cambridge University Press.
KAKD	1911	"Knowledge by Acquaintance and Knowledge by Description " PAS,XI, reprinted in <u>Mysticism and Logic</u> , 1917(1974).
PP	1912	<u>The Problems of Philosophy</u> , Oxford University Press (1970)
ORUP	1912	"On the Relations of Universals and Particulars", PAS, reprinted in <u>Logic and Knowledge</u> 1956(1971)
MS	1913	<u>Epistemology</u> , Unpublished Manuscript in the Bertrand Russell Archives, McMaster University.

(Abbreviations)	<u>Works by B. Russell (cont.)</u>	
ONC	1913	"On the Notion of Cause", PAS, XIII, reprinted in <u>Mysticism and Logic</u> , 1917(1974).
OKEW	1914	<u>Our Knowledge of the External World</u> , Allen & Unwin, London, (1972).
OSMP	1914	"On Scientific Method in Philosophy" the Herbert Spencer Lecture at Oxford, reprinted in <u>Mysticism and Logic</u> , 1917(1974).
ONA	1914	"On the Nature of Acquaintance", <u>Monist</u> , v.24, reprinted in <u>Logic and Knowledge</u> , 1956(1971).
DMPTK	1914	"Definitions and Methodological Principles in the Theory of Knowledge", <u>Monist</u> , v.24.
RSP	1914	"The Relation of Sense-data to Physics", <u>Scienza</u> , n.4, reprinted in <u>Mysticism and Logic</u> , 1917(1974).
UCM	1915	"The Ultimate Constituents of Matter" <u>Monist</u> , v.25; reprinted in <u>Mysticism and Logic</u> , 1917(1974).
PLA	1918	"Philosophy of Logical Atomism", <u>Monist</u> , v.28, reprinted in <u>Logic and Knowledge</u> , 1956(1971).
IMP	1919	<u>Introduction to Mathematical Philosophy</u> , Allen & Unwin, London, (1975)
OP	1919	"On Propositions: What They Are and How They Mean" <u>PAS</u> , II, reprinted in <u>Logic and Knowledge</u> , 1956(1971).
VW	1921	"Vorwort" to Wittgenstein's "Logisch-Philosophische Abhandlung", <u>Annalen der Naturphilosophie</u> , XIV, ed. W. Ostwald.
AM	1921	<u>The Analysis of Mind</u> , Allen & Unwin, London.
I	1922	"Introduction" to Wittgenstein's <u>Tractatus Logico-Philosophicus</u> , Kegan Paul, London.
V	1923	"Vagueness" <u>Australasian Journal of Psychology and Philosophy</u> , v.I.
LA	1924	"Logical Atomism", <u>Contemporary British Philosophy: Personal Statements</u> , reprinted in <u>Logic and Knowledge</u> , 1956(1971).
AM	1927	<u>The Analysis of Matter</u> , Kegan Paul, London.
IMT	1940	<u>An Inquiry into Meaning and Truth</u> , Allen & Unwin, London, (Penguin, 1973).

(Abbreviations) Works by B. Russell (cont.)

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- HKSL 1948 Human Knowledge Its Scope and Limits, Allen & Unwin, New York, (1976).
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- NB 1914-17 Notebooks 1914-1916, ed. G.E.M. Anscombe and G.H. von Wright, English translation by G.E.M. Anscombe, Blackwell, Oxford, 1961 (1969).
- LE 1916-37 Paul Engelmann Letters from Ludwig Wittgenstein, with a Memoir, ed. B.F. McGuinness, Blackwell, Oxford, 1967.
- PT 1918 Prototractatus, ed. B.F. McGuinness, T. Nyberg, G.H. von Wright, with an Historical Introduction by G.H. von Wright, RKP, London, 1971.
- TLP 1922 Tractatus Logico-Philosophicus, RKP, London, (1969).
- LO 1922-33 Letters to C.K. Ogden, ed. G.H. von Wright, Blackwell, Oxford, 1973.
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- WWC 1929-30 Ludwig Wittgenstein und der Wiener Kreis, Shorthand Notes Recorded by F. Waismann, ed. B.F. McGuinness, Blackwell, Oxford, 1967.
- PG 1932- Philosophical Grammar, ed. Rush Rees, English translation by Anthony Kenny, Blackwell, Oxford, 1974.
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- RFM 1937 Remarks on the Foundations of Mathematics, ed. G.E.M. Anscombe, Rush Rees, G.H. von Wright, Blackwell, Oxford, 1956.
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